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ABSTRACT

Examining the role of community colleges in workforce development, this monograph describes results from a national study of community and technical colleges and the employers they serve regarding needs for workforce training and successful program elements. Following introductory sections, reviewing the purpose of the study, the following chapters are provided: (1) "The Role of American Community Colleges in the 21st Century," (Jack N. Wismer, Tony Zeiss, and Phyllis A. Barber); (2) "A Current Assessment of Community College Workforce Training: A Brief Overview," (Andrew L. Meyer and John W. Quinley); (3) "AACC/NETWORK National Community College Workforce Development Database," (Robert J. Visdos, James F. McKenney, and Richard G. Anthony, Jr.); (4) "Rethinking the Role of Instruction for Workforce Training," (Sherrie L. Kantor); (5) "Survey of Employers," (John W. Quinley), presenting results from the 2,473 employers who responded to the survey; (6) "Survey of Deans and Directors," (Phyllis A. Barber), describing successful program elements identified by the 56 community college administrators responding to the survey; (7) "Discussion of Survey Results: Employers and Deans and Directors," (John W. Quinley and Phyllis A. Barber); and (8) "Conclusions, Implications, and Recommendations," (Patricia Donohue, Elizabeth Thornton, and Tony Zeiss). Appendixes provide organizational charts of model workforce development systems, a list of colleges participating in the survey, and the employer survey instrument. (HAA)

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DEVELOPING THE WORLD'S BEST WORKFORCE

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TONY ZEISS & ASSOCIATES

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DEVELOPING THE WORLD'S BEST WORKFORCE

AN AGENDA FOR AMERICA'S COMMUNITY COLLEGES

BY TONY ZEISS & ASSOCIATES

General Editor: *Tony Zeiss*

Technical Editor: *Phyllis A. Barber*

Principal Researcher: *John W. Quinley*

Principal Study Participants and Contributing Authors: *Richard G. Anthony Jr. • Patricia Donohue • Sherrie L. Kantor • James F. McKenney • Andrew L. Meyer • Elizabeth Thornton • Robert J. Visdos • Phil Ward • Jack N. Wismer*

Sponsored by

National Council for Continuing Education and Training,
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AMERICAN ASSOCIATION OF COMMUNITY COLLEGES

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This book is dedicated to

Dr. Phyllis Allran Barber,

a dedicated community college professional.

1946–1996

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FOREWORD

Community colleges are gradually emerging as the prototypical learning institutions for the new economy. They equip graduates with a mix of applied and academic learning that is increasingly necessary to sustain careers in modern economies. Graduates receive occupational preparation that allows access to jobs that general education, all by itself, no longer guarantees. As a result, the earnings of community college graduates who work in managerial, professional, and technical occupations are higher, on average, than the earnings of four-year college graduates with no particular occupational preparation. At the same time, community college preparation is superior to job-specific training, on and off the job. Community college curricula provide general education and broadly based occupational learning—which adds longevity and transferability to a graduate's skills—that more specific job training, all by itself, does not provide.

Community colleges maintain a unique position among educational institutions as providers of both skill training and academic knowledge. Two-year schools educated 5.4 million students in 1994, nearly as many students as public four-year institutions. Community colleges often serve as conduits to four-year educational programs with approximately 20 percent of students who complete two-year programs continuing on to four-year schools. More often than not, however, these two-year schools provide the applied skills training that workers need before they enter into the workforce. For workers who needed training to obtain their current jobs, two-year schools trained nearly as many workers as did formal company programs (eight and 12 percent respectively). Furthermore, workers who needed skills improvement training on the job were just as likely to obtain their training from two-year colleges (four percent) as four-year colleges (five percent).

Community colleges are likely to be a growing force in the evolving American education and training system. Two-year school enrollments are projected to increase by 14 percent over the next decade as the "baby boomlet" children of the baby boom swell the ranks of young Americans in transition from school to work.

Community colleges, however, need to expand their role in retraining adults. By the year 2005, employers will need to increase the incidence of formal company training by nearly 25 percent, an additional $15.1 billion over current spending. They will need to spend a total of $78 billion just to maintain the training levels provided in 1991.

We cannot expect employers to carry the costs of the growing need for career development among employed workers. Competitive pressures are forcing large employers to lay off all but their core workers and core competitive functions and replace them with supplier networks and contractors. Large employers are outsourcing training, and mid-sized and small employers do not have sufficient revenues to provide employee training and other career development services.

Ultimately, both public and private interests are best served by creating networks of employers and community colleges. Strengthening the relationship between employers and community colleges satisfies both the public interest in enhancing individual career development in increasingly dynamic labor markets and the private interest in increasing businesses' competitiveness in the marketplace. Community colleges provide the job-specific needs of employers and the career development needs of employees. Community college programs are a good substitute for formal employer training. They have the potential to increase the efficiency of the work and learning transitions as well as to expedite the transmission of new skill requirements from the workplace into the community college system.

Anthony P. Carnevale
Donna M. Desrochers
Educational Testing Service

PREFACE

A common goal for education and business has emerged. Educating and training America's workers has become paramount to our economy, our standard of living, and our influence in the world theaters of trade, politics, and human development. It is gratifying to see that this country's community colleges are leading the way in workforce development. This ambitious National Workforce Development Study leaves little doubt that the 1,100 community colleges in the nation are fulfilling a major need in preparing today's workers and are paving the way for preparing tomorrow's workers with the knowledge and skills needed for our prosperity to continue in the global marketplace. Most impressive to me is the verification provided in this comprehensive study that America's businesses and industries are using our colleges for a majority of their outsourced training and retraining of workers. In effect, the community college movement that has served so many millions of our citizens over the past several decades is now being recognized for its relevance to the workplace and to this country's economic well-being. The researchers of this landmark study and the authors of its results have my respect and appreciation for a job well done.

The signal key to America's economic future is the ability to have a productive and skilled workforce. The results of this study indicate that the business community recognizes the importance of having and keeping knowledgeable workers and that community colleges have responded to this growing need in exemplary fashion. The federal government is advocating a major overhaul of the job training system because policy makers also understand the importance of getting and maintaining a world-class workforce. As we move into the "new economy," as so often described by former U.S. Secretary of Labor Robert Reich,

we must collaborate as never before. Recent studies show our community colleges are operating on 15 to 20 percent fewer financial resources today than they did 15 years ago, and the demands for limited tax dollars seem to be greater than ever. There is a natural opportunity here for community colleges to move into collaborative relationships with business, government, and each other to see that their institutions continue to meet their missions and lead the way in developing the best workforce in the world. As this study points out, successful partnerships are not strangers to community colleges.

We have some significant challenges to meet head on. Globalization, fragmentation, technology, curricula reform, diminishing resources, changing accreditation criteria, and moving from teaching to learning organizations are representative of these challenges. We will be successful in meeting these challenges just as our colleges are meeting the challenge of producing better workers. However, we must be prepared to communicate the colleges' value to policy makers and the general public in more effective ways if we hope to see increases in our financial support and changes in the operating processes that tend to limit our flexibility in preparing people for the new economy.

The results of this national study and its clear implications represent the type of information we should communicate to our students, the people who employ them, policymakers, and the media. As community colleges are identified as those institutions that focus on worker development, whether through transfer education or corporate education and training, they will no longer struggle with identity issues that confuse so many individuals in positions of influence. This monograph and its associated publications and public presentations are excellent examples of what we should be doing in this regard. Certainly we need to know what colleges across the country are doing, but it is even more important that policymakers, the business community, and the public at large know the value of our contributions to the development of America's workforce.

The validation that 75 percent of this nation's employers have immediate worker training needs and that they view community colleges as their logical education and training providers is significant in itself. This book provides, perhaps for the first time, a comprehensive and clear profile of what education and training is needed, what will be needed, and how community colleges are going about meeting those needs. This information is significant to anyone who cares about the future of this country, the future of its businesses, and the future of its community. I encourage you to read it, use the information to help your college become more effective in worker training, and share it widely with those people who most influence how your colleges are funded and operated.

David R. Pierce
President
American Association of Community Colleges

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The authors of the National Workforce Development Study wish to acknowledge the American Association of Community Colleges (AACC) for its active role in the publication of this study and for the leadership it has provided in spotlighting community colleges as the logical national force for economic and workforce development. Particular thanks go to David Pierce, AACC president, for his strong advocacy of the community college role in workforce development in the nation's capital and across the country and for his work with organizations such as COMBASE, the National Council for Continuing Education and Training (NCCET), and the National Council for Continuing Education (NCOE). Special acknowledgment is also given to Norma Kent, AACC Director of Communications, for her leadership throughout the publication process.

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- Dr. Shanzi Ke, Senior Research Analyst, who assisted in the design of the survey instrument and programmed the survey form, so it could be read by electronic means. Dr. Ke also provided the statistical analysis for the employer survey and produced summaries of individual college results for all 104 participating colleges.
- Dr. Bindia Puri, Research Specialist, who coordinated the logistics of corresponding with almost 450 colleges; an estimated 1,500 pieces of mail were sent. Dr. Puri also supervised the data entry process for more than 500 pages of survey data and

organized more than 100 pages of narrative data.

- In much of this work, Dr. Puri was assisted by Cecil Carter, Information System Analyst. Also assisting in this process were student aides Yolanda Glover, Marye Lasco, and Carolyn Lockhart.
- Dr. Randall Hickman, Senior Research Analyst, who assisted in the general editing process for several chapters. Dr. Hickman carefully reviewed the reported data, made suggestions for the insertion of relevant secondary sources, and helped structure the Discussion of Survey Results chapter.
- Ms. Barbara Skinner, Secretary to the Assistant to the President, who was involved with the research process throughout the study, but whose primary contribution came during the final stages of document preparation. Ms. Skinner worked diligently preparing successive drafts of the final version of all the chapters.

INTRODUCTION

Rapid and profound change is transforming the American economy. Never before have workers been faced with the need to acquire such a comprehensive range of skills in order to meet and overcome the challenge of global competition. Never before have American employers faced such a need to keep the skill levels of their workers so high in order to compete. This transformation reaches from the boardroom to the shop floor. In fact, frontline workers are now expected to have essentially the same broad set of skills previously required only of supervisors and managers. The salient question today is how can we get and keep a highly skilled workforce.

Many businesses and industries across the nation have attempted to solve their training needs by developing large training divisions. Others have used private trainers, but most have discovered the utility of contracting or partnering with America's community and technical colleges. Indeed, the trend in corporate America during the past few years has been to outsource much of their training to these prolific colleges.

In this new, more competitive age, America's community colleges have emerged as vanguard institutions in preparing workers and their companies for the challenges ahead. The reasons are many.

- 1,100 community colleges provide high accessibility to all Americans.
- Community colleges offer diverse and flexible training services.
- Employers are having positive workforce training experiences with community colleges.

This monograph emanated from a national workforce training study that clearly identified

community and technical colleges as the entities most preferred by employers to provide worker training. The national study, which surveyed employers, consumers, and community college providers, sought to

- describe the training needs of America's workforce;
- identify the success factors of community college-based workforce training;
- establish the effectiveness of community college workforce training; and
- present the study results to America's policy makers to assist them in developing federal and state job training legislation.

The two-phase study involved 2,400 employers and 104 community colleges. The research method was patterned after similar state studies recently conducted in Michigan, Iowa, and Maryland. The study indicates that America's community colleges are the preferred providers of workforce training and that there is an expanding need for more workforce training, especially for existing workers. In addition, the study establishes an agenda for change. Market demands are changing and community colleges must change to meet them. Partnerships and collaborations with business and government have become critical for those colleges who wish to remain customer-driven and community-based.

The monograph reviews the methods, findings, and conclusions of the study. Its strength lies in the unquestionable value that employers place on community college-based workforce training. The comprehensive national study, the associated Executive Summary, and this monograph should serve as a signal foundation for future legislation affecting job training and workforce preparation in this country. Clearly, America's community colleges have established a noble and undeniable purpose for themselves. They have evolved and will continue to serve as the preeminent trainers and retrainers of the American workforce.

Tony Zeiss

CHAPTER 1

The Role of American Community Colleges in the 21st Century

The bricks and mortar are largely in place for a superb National Training Network . . . almost unnoticed, America's community colleges have been transforming themselves into training academies (Stewart, 1991).

Economic and Community Development Mission

The knowledgeable worker is absolutely necessary to America's ability to compete in a global economy. The United States continues to face an urgent challenge to its business competitiveness in a world marketplace. Essentially, if Americans want to live well, Americans must produce well. To produce well, employers must have knowledgeable and skilled workers. Clearly, the demand for workforce education and training has never been greater. The National Workforce Training Study featured in this monograph delineates the current and future training needs of America's businesses and validates the direction of our community and technical colleges.

The key to America's economic future is to better educate students and train existing workers to compete successfully in tomorrow's world of work. Over 15 years ago, Peter Drucker in *Managing Turbulent Times* (1980) emphasized that productivity of people requires continuous learning. According to Joseph Boyett and Henry Conn (1991, p. 278), "in workplace 2000, the most valuable commodity will be knowledge. . . . To participate in the game, Americans will have to possess the requisite skills."

The role of American community colleges in providing quality workforce education for

students and workforce training for employees has never been more important. American community colleges by their mission are committed to learning for a lifetime — lifelong learning. In the book *The Monster Under the Bed* (1994), Stan Davis and Jim Botkin stress that to stay competitive companies will increasingly play the major role in making education a lifelong learning process for consumers, employees, and students alike. In *Building Communities: A Vision for a New Century*, the Commission on the Future of Community Colleges reported:

> *. . . .lifelong learning is an essential mission the community college is uniquely qualified to fulfill. . . . Worker training is the central focus of this partnership. . . . And the master plan of every community college should be creative in responding to its essential role of training and retraining (1988, p. 22).*

Occupational education and customized workforce training is central to the economic and community development mission of American community colleges. This mission is consistent with community colleges' historic mandate to respond to community and regional education and the training needs of taxpayers, our customers.

Workforce Training Trends

Every major industry except education has made significant changes in how it does business and serves people. Too often educators resist change by clinging to the way things have been done in the past and by doing business as usual. However, America's community colleges have demonstrated the willingness to change and be responsive to marketplace needs.

Global market competition, workforce demographics, and technological advancements are dynamic forces that are changing how we do business. To survive, compete, and succeed, American companies now shop the world market for workers, resources, and business partners. Workforce demographics will change as the baby boomers continue to age and as new workers come from a variety of diverse backgrounds. All Americans will need increased technical knowledge at every stage of their careers and will often receive training delivered in multimedia and long-distance formats.

Community colleges must and will continue to change and be responsive to the new economy and new workforce trends.

- Sixty-five percent of the new jobs by the year 2000 will require post-secondary education and training beyond high school, but below the baccalaureate level (Day, 1996).
- According to a recent *Kiplinger Washington Letter*, the number of manufacturing jobs will continue to decline. They will represent 17 percent of all jobs in 1996 and decrease to approximately eight percent by 2015 (1996).
- Toward the year 2000, the National Center for Educational Statistics projects an increase of only five percent enrollment among students under 25 years of age. However, it also projects a 16 percent increase in enrollment of students over 25 years old (Gerald, Horn, and Hussar, 1989).
- Seventy-five percent of the current work-

force will need training by the year 2000, according to the U.S. Department of Labor and the American Society for Training and Development (Day, 1996).

- Seventy percent of the people who will be working in the year 2000 are on the job now (Commission on the Skills of the American Workforce, 1990).
- Today's workers need to be proficient learners, knowledgeable, skilled, and communicative as never before.

According to the American Society for Training and Development, American firms spend $30 billion for formal training of employees and between $90 and $180 billion for informal training (Rudolph, 1993). Motorola, for example, has discovered that they gain as much as $30 in productivity for every dollar they invest in employee training (Jeffords, 1995). There is real opportunity for community colleges to partner with business and industry, especially with smaller businesses who will gladly use our colleges as their training divisions.

We know the workforce is changing. Jobs are changing. Communications technology is revolutionizing and will revolutionize learning for students and employees. As the economy changes, American community colleges will do business in new ways.

Community colleges are faced with the challenge and opportunity to become even more customer-focused. The information economy is forcing all learning organizations to rethink work. It is also forcing them to reconsider the ways in which they deliver workforce preparation/education and workforce training in the 21st century.

The Role of American Community Colleges

Over the past 10 years, American community colleges have continued to make significant contributions as quality workforce education and training partners with business and industry. Community colleges have become essential to revitalizing and growing our nation's economy. National organizations such as the American Association of Community Colleges, the American Society for Training and Development, the National Council on Community Services and Continuing Education, and the National Council on Occupational Education have emphasized the important role of workforce education and customized workforce training.

The League for Innovation asserts that community colleges are emerging as one of the major, logical providers of the workforce training required to revitalize and maintain the competitiveness of the nation's business and industry (Doucette, 1993). Community colleges are the logical providers of key infrastructure training for a number of reasons.

- Community colleges have a long history of providing vocational, technical, and career training in fields that reflect the needs of their local economies.
- Community colleges have a close working relationship with local constituents, including local business and industry.
- Community colleges already provide a variety of training programs and services where the unmet need for worker training is the greatest.
- Community colleges have considerable

successful experience in programs and services for adult students.

- Community colleges have invested in alternative delivery mechanisms that are well positioned to serve adult learners.
- Community colleges have also invested heavily in support services for students.
- A community college is located within commuting distance of more than 90 percent of the local population of the nation as well as within every congressional district.

The American Association of Community Colleges' Commission on Community and Workforce Development (1996) developed a position paper on the role of American community colleges in meeting their economic and workforce development mission for the future. The paper contains models that feature a systems approach to education and training. Each model can be adapted, expanded, and customized by community colleges and their states to meet the needs of business and industry. Each model needs to be customer-focused, rather than college program-driven. (See Appendices A and B.)

All community colleges must accept the responsibility to become proactive leaders at local and state levels, so they can meet current and future occupational educational and workforce training needs. In addition, several workforce training studies conducted by state associations in Iowa, Michigan, and Maryland have continued to demonstrate the important role of community colleges in providing quality, cost-effective workforce training to develop a skilled workforce for the 21st century (Iowa Department of Education, 1991; Iowa Association of Adult and Continuing Education Deans and Directors, 1996; Wismer and Zappala, 1993; Clagett, 1995). Indeed, this comprehensive National Workforce Training Study underscores the critical role of community colleges in preparing America's workforce.

The Workforce Economy for the 21st Century

Building a vision: Three brick masons were busy at their trade, working side by side, when along came a curious tourist who asked, "What are you doing?"

"Laying bricks," the first mason shot back. "What does it look like?"

Undaunted, the tourist repeated the question to the second mason. "What are you doing?"

"Building a wall," the dutiful worker replied.

"And what about you?" the tourist asked the third mason. "What are you doing?"

"Me?" The third mason looked up with a smile and said, "I am building a cathedral."

This is an old story with a powerful message: Imagine what can be instead of what is. In building a cathedral or a skilled workforce for an organization, the capability to imagine what can be is necessary to transform goals into reality. With changing workforce demographics, technology, and global competition, American community colleges have an exciting role in partnering with business to develop a skilled and trained workforce for the 21st century.

As the world and local economies change, community colleges must change to serve our customers. In *The Monster Under the Bed*, the authors emphasize that "the knowledge revolution will power the new global economy, reshape many of our institutions . . . particularly

education. . . . Business sees the opportunity, and it is driving ahead full speed to realize the vision to adapt to, and profit from, the realities of the new information economy" (1994, pp. 14–15). Business and community colleges must continue to work together to develop a skilled workforce. This fundamental collaboration will provide a strong economy for our nation well into the 21st century.

Former U.S. Secretary of Labor Robert Reich has said that American community colleges are the linchpin to workforce education and training. In building training partnerships with business and industry, community colleges are building communities, states, and our nation as they build a skilled, productive workforce. Fortunately, the majority of the 1,300 community and technical colleges in this country have recognized the importance of educating and training workers by working closely with business and industry and have customized their services according to content, time, delivery method, and place. Astute community colleges are providing services to at least four major categories of workers: emerging workers, existing workers, entrepreneurial workers, and transitional workers. (See Appendix C.)

With the current interest in legislation that will consolidate federal workforce development and training, it is important that community colleges have a significant role in implementing a workforce development policy that can strengthen America's economic growth. Community colleges need to examine and adopt the legislation of states such as Iowa, Florida, Mississippi, North Carolina, and Texas. These states recognize community colleges as the primary delivery system for workforce education and training.

For example, the legislature in Mississippi established the Workforce and Education Act of 1994, which created workforce development councils to be affiliated with each public community college. The North Carolina legislature established community colleges as the Primary deliverers of training via the One-Stop Career Centers. A One-Stop Career Center functional model, developed by Central Piedmont Community College, features the multiple dynamics of a responsive workforce training system. (See Appendix D.)

Community colleges have exciting opportunities ahead for the year 2000 and beyond. We are building partnerships; we are building communities that can make a difference. Community colleges have a significant national and international role in providing quality workforce development, preparation, and training. By working together with business and industry, government, and other educational entities, America's community colleges will provide its customers with a competitive advantage for the 21st century.

> *In the end, it is important to remember that we cannot become what we need to be by remaining what we are (DePree, 1989).*

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CHAPTER 2

A Current Assessment of Community College Workforce Training: A Brief Overview

The focus of the economic and community development mission and role of community colleges, historically and currently, is the education of students and the training of America's workers to compete successfully in tomorrow's world of work. Through the provision of workforce development programs and related services to businesses, industries, governmental agencies, and other organizations, community colleges have made substantial contributions to the economic development of communities across the nation. As demands for workforce education and training have increased—the result of global competition, technological advances, and changing workforce demographics—community colleges have sought to determine their current effectiveness as training providers and to plan for the workforce training programs of the future.

In recent years, several state community college systems have assessed the impact of their workforce development programs by conducting surveys of clients—the businesses and other organizations that contracted with them for workforce development services (Wismer & Zappala, 1993; Clagett, 1995; Iowa Association of Adult and Continuing Education Deans and Directors, 1996). In preparing for the 21st century, each of the state systems also conducted studies to identify future workforce education and training needs within their states. In fact, data collected as a part of the National Workforce Development Study served as the basis for the 1996 Iowa study.

In each state that has assessed the effectiveness of its community colleges, state associations of community college continuing education professionals have spearheaded the statewide survey initiatives. In 1993, the Michigan Community Colleges Community Services Association, in cooperation with the Michigan Community Colleges Association, conducted a workforce education, training, and retraining

survey. Participants were employers who had taken part in programs offered through Michigan's community colleges. In 1995, the Maryland Association of Deans and Directors of Continuing Education/Community Services replicated, in large part, the study conducted by their Michigan colleagues. In 1996, the Iowa Association of Adult and Continuing Education Deans and Directors, who were participants in the National Workforce Development Survey, took the findings for their state from the National Study and published them as a follow-up to an earlier state study conducted in 1991. The Michigan, Maryland, and 1991 Iowa studies solicited responses directly from their corporate and non-profit clients, using no intermediary collection means.

On a national level, two early, influential studies described the state-of-the art in workforce education and training. One was conducted by R. Deegan in 1988, and the other by R. Lynch, J. Palmer, and N. Grubb in 1991. In addition, according to Frazis, Herz, and Horrigan (1995), a wide array of data have been gathered on training delivered by *all* providers through household surveys, such as the *Current Population Survey, the National Longitudinal Survey of Youth, the Survey of Income and Program Participation, the Panel Study of Income Dynamics, and the Survey of Employer Provided Training.*

Specifically related to community colleges' delivery of workforce development education and training at the national level are two recent studies. The 1993 League for Innovation in the Community College study surveyed the providers of workforce education and training (Doucette, 1993). The American Association of Community Colleges and the U.S. Department of Labor collected data concerning workforce development programs from hundreds of representatives of community colleges, business and industry, and state and local governments at five regional forums. The results were published in 1994 in *The Critical Link* (Falcone).

Each state study and the two recent national studies (Doucette, 1993; Falcone, 1994) provided a foundation for the National Workforce Development Survey, which included the perspectives of both the clients of workforce education and training programs and the providers of these programs. To place the findings of this National Workforce Development Study in relationship to other contemporary workforce development studies, this chapter furnishes an overview of the findings of each of three state studies—Michigan, Maryland, and Iowa—and the two recent national studies. Each study investigated, specifically, community college workforce education and training.

State Study: Michigan Community College Workforce Training Programs (1993)

Purpose and Method

Determining the economic impact and accountability of workforce training programs served as the primary purpose of the Michigan study; 25 of the 32 community colleges in Michigan participated. The survey was designed to develop a profile of Michigan businesses and industries served by the community colleges in order to determine

- employer satisfaction with the community college education and training programs;
- project training needs for the immediate future; and

- identify ways for the community colleges to improve.

Each of the participating colleges was asked to identify 25 to 50 companies the colleges had served when they furnished an education and training program for company employees. The survey instrument, designed after a similar instrument used in a study conducted in Iowa (Iowa Department of Education, 1991), was sent to business and industry contacts identified by the Michigan community colleges.

Findings

A total of 442 surveys, representing approximately a 50 percent response rate, was returned by the colleges' business and industry contacts. The number of surveys returned to individual colleges ranged from 6 to 36.

Fifty percent of the respondents indicated that their workforce had fewer than 200 employees. Manufacturing industries represented the largest percentage of respondents at nearly 71 percent. The two major criteria for selecting a Michigan community college for training services were their cost effectiveness (nearly 64 percent) and customized training programs (60 percent). Other criteria included convenience (56 percent); quality of instruction (44 percent); and past satisfaction with services (37 percent). Thirty-nine percent of the employers in the survey sought workforce education and training services from community colleges with the goal of improving the performance of their employees. Thirty percent sought education and training to upgrade the skills of their employees.

More than three-fourths (79 percent) of the respondents reported that the colleges did an "excellent" or "very good" job at meeting the education and training needs of their companies. Ninety-three percent of the companies would recommend Michigan community colleges to other employers in the state. Ninety-one percent of the respondents were either "very satisfied" or "satisfied" with the training conducted by the local community college.

More than three-fourths (77 percent) of the employers projected an increase in training needs within the immediate future. Nearly three-fourths (73 percent) of the respondents indicated their intent to use the local community college to meet their training needs. Ninety-four percent of survey participants responded that training programs would be either "very important" or "important" in preparing their employees to compete in a global economy. Sixty-three percent of the companies indicated that 20 percent of their workforce would need academic credit for professional advancement.

Four workforce training programs received more than a 50 percent response rate. They were identified as the programs most likely to benefit the companies surveyed: quality improvement training, computer skills training, management/supervisory development, and employee involvement teams. Developing customized job skills and total quality continuous improvement emerged as the two most important areas in which Michigan community colleges could provide better service to the companies responding to the survey.

State Study: Maryland Community College Workforce Training Evaluation and Needs Assessment (1995)

Purpose and Method

The research purposes of the Maryland study were to

1. develop a profile of the businesses and organizations served by Maryland community colleges;
2. determine employer satisfaction with workforce education and training services;
3. identify future workforce training needs of employers; and
4. determine ways in which the community colleges could provide improved service.

All 18 Maryland community colleges participated in the business and industry study.

The survey instrument used in Maryland mirrored the questionnaire used in the Michigan study. Unlike the Michigan study, however, surveys were sent to all businesses and industries for which training was conducted by Maryland community colleges during fiscal years 1993 and 1994.

Findings

A total of 1,021 surveys were sent to Maryland employers. The number of usable responses was 561, representing a return rate of 55 percent. The number of surveys returned to individual colleges ranged from 14 to 65.

Twenty-nine percent of the companies indicated a workforce of 250 individuals or larger; 21 percent of the establishments employed 100 to 249 individuals; 14 percent of organizations had 50 to 99 employees; and 36 percent of the employers had fewer than 50. The Maryland survey asked how many employees participated in training at the respondent's location. Responses ranged from fewer than 10 to more than 100 individuals, with 25 being the median number of participants. The three largest categories of employers served by community colleges in Maryland were government (23 percent); manufacturing (22 percent); and health care (20 percent).

Almost three-fourths (74 percent) of the participating employers responded that upgrading employee job performance was the primary goal for contracting with community colleges for education and training. Nearly one-half (45 percent) of the respondents cited preparation for new skills or for a new job classification as the primary goal for training employees. Self-enrichment of employees (38 percent); training mandated by the profession (22 percent); and training mandated by law (14 percent) were other goals cited.

Sixty-nine percent of the survey participants cited "cost effectiveness/good value" as the major reason for selecting community colleges to conduct training programs. The capacity of the community college to offer customized training was recognized by 59 percent of the respondents as the second most important reason for selecting community colleges as the providers of workforce training programs. Additional reasons included "quality of instruction" (50 percent); "good results in the past with the college" (42 percent); and the provision of on-site training (39 percent). Seven percent were "referred to the college by others."

An overwhelming 97 percent of the respondents rated the level of satisfaction with training as "very satisfied" or "satisfied." Ninety-six percent of the respondents indicated that they would recommend the community college to other employers. When asked if the company would call upon the community college to meet future training needs, 93 percent responded that they "definitely" or "probably" would use the community college again.

The greatest need for future workforce training in Maryland was in the area of computer applications. Fifty percent of the respondents indicated there would be a substantial need in the immediate future. Training in supervision and leadership, team building and interpersonal relations, and written and oral communications were cited as the areas most needed after computer applications.

Responses from companies indicated their overall approval of the level of service provided by the community colleges. In remarks made to the open-ended questions, an emerging theme was that the college should continue doing what it had done in the past, that is, serving business and industry on a cost-effective, customized basis.

State Study: Iowa Workforce Training Study (1996)

Purpose and Methodology

Since the Iowa study was a state study based on the findings for the state in the National Workforce Development Study, the purpose and methodology were similar to those of the national study. The Iowa study was designed around two research questions. First, employers were asked about their education, training, and retraining needs. Second, they were queried about how the community colleges in Iowa could best meet those needs. All 15 of the community colleges in Iowa participated in the workforce training study, using the collection method of the National Workforce Development Study.

The data were collected through a survey instrument distributed to employers. All but a few companies had been served during the 1994–95 academic year by the local community college.

Findings

Surveys were mailed to 1,069 employers. A total of 608 surveys were returned for a response rate of 57 percent. Slightly more than one-third (35 percent) of the respondents indicated they represented the industrial/manufacturing sector, 21 percent the health services sector, and 16 percent the government/public sector of the workplace. Twelve percent of these employers had more than 500 employees; 30 percent had 101 to 500 employees; 37 percent had 26 to 100; and 21 percent of the organizations had fewer than 26 employees.

"Improving job performance" (81 percent) and "upgrading job skills" (76 percent) were the top two goals for which employers sought training from community college workforce education and training programs. Professional/self development was cited by 47 percent of the respondents as an education and training goal. Other training goals cited were that training was required by the profession (29 percent) or required by a supplier/customer (10 percent).

As in the Michigan and Maryland studies, the top reason the employers of Iowa selected community colleges to conduct their training was cost-effectiveness (68 percent). Other reasons for selecting community colleges included convenience (56 percent), the colleges' capacity to offer customized training (52 percent), the quality of instruction (49 percent), and satisfaction with past results (46 percent). Seven percent of the employers in the survey indicated they selected a community college because the program was referred by other businesses.

The Iowa study sought to determine the proportion of the current workforce that needed training. Three-fourths of the businesses reported that between 25 percent and 100 percent of their workforce needed additional training; 23 percent reported that 76 to 100 percent needed training. Furthermore, when asked about the extent to which technology would be a factor in determining training needs, 29 percent of employers indicated it would be a considerable factor; about one-half (53 percent) saw technology as having some influence on training needs. Incorporating distance-learning technology into workforce training efforts was thought to be beneficial by more than 80 percent of the survey participants.

Of 12 composite skills areas listed in the survey, 10 were "needed" or "much needed" by 50 percent or more of employers. Areas needed most (defined as 85 percent or more of employers indicating "needed" or "much needed" areas) were professional development (87 percent); computer skills (86 percent); and interpersonal skills (85 percent). In response to whether classes needed to be credit or non-credit, more than one-half of the employers (55 percent) indicated that both types were needed. Nearly 40 percent indicated a need for only non-credit classes.

Iowa respondents indicated an extremely high rate of satisfaction with both the programmatic and student outcomes aspects of workforce education and training programs. Ninety-five percent of employers rated the quality of the workforce programs as "good" or "excellent." Ratings of "good" or "excellent" for other programmatic aspects included "responsiveness to employer needs" (91 percent) and "cost effective" (88 percent). Ratings of "good" or "excellent" received in the area of student outcomes ranged from 86 percent to 90 percent. Ninety-five percent of the employers responding to the survey would recommend Iowa community colleges to other employers.

National Study: The League for Innovation in the Community College (1993)

Purpose and Method

In 1992, the League for Innovation in the Community College conducted a survey of all two-year colleges in the United States. The survey was designed to determine individual community college involvement in workforce education and training programs during the 1991–1992 academic years. Meeting the needs of local businesses, obtaining company profiles, the delivery of workforce training programs, and the types of contractual agreements between colleges and companies were among the key areas targeted in the study.

Findings

A total of 1,042 surveys were mailed to the two-year colleges; the number of responses totaled 748 for a 73 percent response rate.

Ninety-six percent of the community colleges participating in this study indicated they provided workforce education and training services to business, industry, labor, and government, a significant finding. Twenty-seven percent of the community colleges provided customized training for local employers.

Survey results revealed that two-thirds of the employers who were served by community college workforce development programs had

fewer than 500 employees. The colleges responding to the study served employers in manufacturing (39 percent); government (13 percent); and health services (12 percent).

Survey results showed that the most common areas of training were job-specific (20 percent); computer-related (19 percent); supervision and management (15 percent); and workplace literacy (10 percent). This study did not attempt to ascertain future training needs of the business community.

Colleges responded that traditional methodologies, including lecture, discussion, workshops, and hands-on training, were used in 85 percent of their training. About one-half of the education and training was conducted in off-campus facilities provided by the employer, and one-half of the programs were provided on the college campus. The most common staffing arrangement was to hire external trainers to provide training on a contract-for-services basis.

More than 90 percent of the workforce training units of these colleges were housed in the continuing education/community services division that was under the leadership of a dean or director. More than eight out of 10 colleges reported that their workforce training unit had been functioning for at least three years.

Nearly 85 percent of the responding colleges perceived that they were effectively meeting the training needs of their existing clients. The most commonly cited major obstacles to providing effective workforce training were, in order, inadequate budgets to support training activities (35 percent); the inability of employers to afford training costs (25 percent); difficulty in gaining recognition as a provider of workforce training (23 percent); lack of experienced trainers (22 percent); and inadequate support for curriculum development and other up-front costs (22 percent).

National Study: AACC and the Department of Labor Forum Study (1994)

Purpose and Method

To explore in depth both local workforce education and training concerns as well as ideas for delivering effective training services, particularly to workers in small- and medium-sized companies, were the principal purposes of the American Association of Community Colleges (AACC) and the Department of Labor (DOL) Study (Falcone, 1994). Representatives from AACC and DOL traveled to five areas of the country to conduct regional meetings with community college business/industry liaisons and presidents. Roughly 25 community college representatives attended each meeting. A total of 80 community colleges from 10 states were represented, with a relatively equal distribution of participants from rural, urban, and suburban areas.

Information about national programs, policies, and legislation that directly affected the linkage between community colleges and local companies was presented at each meeting by AACC and DOL staff. Each participant was encouraged to identify the strengths of and challenges faced by a particular college's program. Each group also discussed what colleges needed if they were to more effectively deliver their programs, which included topics such as the information, training, and the nature of the assistance required.

Findings

Participating colleges reported that they provided training for a wide variety of skills areas: computer, technical, workplace literacy, team building, supervisory, communications, total quality management, and ISO 9000, among others. Almost all reported the training they offered business and industry was customized for workers in individual companies.

The concerns and needs of the participating colleges were strikingly similar. At all five regional forums, four issues were raised repeatedly and identified as the colleges' most pressing concerns regarding the effective delivery of workforce services:

1. Inadequate funding resources, particularly for training in small- and medium-sized companies;
2. Inadequate workplace literacy skills;
3. Blurred community college images;
4. Difficulty in linking training with existing jobs.

The study concluded with the declaration that "community colleges, business and industries, and local, state, and federal government must work together to ensure that the obstacles affecting effective workforce training can be minimized or eliminated" (Falcone, 1994, p. 10).

Conclusion

Until the National Workforce Development Study was conducted, statements about the current effectiveness and future of community college workforce education and training programs have relied on the findings of two recent national studies and individual state studies. Each of these studies has contributed to our understanding of the important role of community colleges in economic and workforce development.

One of the national studies, the 1993 League study, involved 1,042 of the nation's community colleges and obtained a 73 percent response rate. Its findings clearly established the involvement of community colleges in the delivery of workforce education and training. According to the study, 96 percent of the responding community colleges were engaged in the delivery of workforce development education and services to business and industry, labor, and government. While indicating type and size of business served and the most common areas of training, for example, the study did not, by design, examine the future training needs of business and other organizations.

The other national study, a series of forums jointly sponsored by AACC and the Department of Labor, discovered the strengths of and challenges faced by community college programs and what they needed in order to deliver more effective programs. It too did not examine the needs of businesses and other organizations in the future.

Along with the two national studies, the studies of Iowa, Michigan, and Maryland—which span the period 1991 to 1995—are the nexus of current literature on community college workforce development efforts. The state studies were developed around the core of a single instrument, the instrument developed for the 1991 Iowa study and refined with each subsequent administration by a state. The

studies share some striking similarities in their findings. However, these studies were designed by the three states to measure the effectiveness of workforce education and training in each state.

A capstone study, the National Workforce Development Study seeks, in its entirety, to complement and expand the national findings of the League for Innovation and the AACC-Department of Labor studies and the state studies of Iowa, Michigan, and Maryland. Complementing and expanding upon previous research, it takes workforce development research to the next level, providing a base of knowledge about national, regional, and local policy development. The National Study provides a comprehensive picture of the workforce education and training needs of the nation's employers, now and in the future. It brings together the perspectives of the clients of workforce education and training programs, employers, and of the providers of those programs, continuing education deans and directors.

It examines how well community colleges across America are currently meeting the identified workforce development needs of employers, an examination based on the employers' perspectives. In addition, factors that contribute to and challenge the success of workforce development programs are detailed by the providers of those programs, the deans and directors of continuing education. When full measure is taken of the study's findings and combined with the information and ideas generated by the authors of this book—many of whom are leaders in the workforce development movement—community colleges across the country will be able to discuss and confirm the value-added nature of their work.

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CHAPTER 3

AACC/NETWORK National Community College Workforce Development Database

The National Workforce Development Study contained in this book underscores the need for rapid responses to training needs. This study also points out that most employers need training that is tailored to their specific business or agency requirements. This chapter describes a national database of curricula that has been specifically designed to assist colleges in meeting the ever expanding and changing training needs of America's businesses and workers.

By circumventing duplicative curricula development costs, community colleges can continue to be cost-competitive, a major concern of the employers who responded to this national study. Whether a community college is attempting to meet the needs of a private-sector employer, a government agency's clientele, or a public-sector agency, the AACC/Network National Community College Workforce Development Database can provide training solutions that produce the desired outcomes.

The Idea Behind a National Database

The premise behind the database is to share information quickly and cost-effectively among community and technical colleges, so these institutions can meet the training needs of both the private and public sector. By sharing curricula at little or no cost among institutions when a competitive bid situation is not prevalent, colleges can rapidly develop or obtain programs to meet the needs of local employers. Through the sharing of curricula, or the purchase of a specific training curriculum at low cost, participating colleges can offer training to local employers at a fraction of the cost of developing a new program to meet customer requirements.

When a college or training organization develops an entirely new instructional program

to meet the needs of an employer, someone has to bear the costs. That someone is usually the employer who wants the training. With small- and medium-sized employers in particular, the additional cost of developing a new curriculum is often the decisive element in determining whether the training will be offered.

The National Workforce Development Study contained in this book provides an indication of the importance of small- to medium-sized businesses in community college training programs and the importance of cost to those businesses. Seventy-five percent of the employers participating in the National Workforce Development Study were small- to medium-sized businesses. (Small-sized businesses were those having 100 or fewer employees; medium-sized businesses, 101 to 500 employees.) In their comments, employers and deans/directors who participated in the National Workforce Development Study referred to the need for cost competitiveness for training program participation and success. More than two-thirds (68.3 percent) of the employers identified cost effectiveness as a reason for selecting community colleges for their training.

Through a shared database, colleges can acquire a curriculum that matches or nearly matches a company's training needs at little or no cost. The curriculum can then be modified to meet a local employer's needs at a fraction of the cost and the development time needed for a new curriculum.

The idea for the database originated from staff at Cuyahoga Community College. After the college's Unified Technologies Center (UTC) opened in 1986, a number of employers requested training services that had not yet been developed by UTC staff. To meet the needs of the companies that were requesting services, the staff first had to find a content expert in the field for which training was to be developed. Once the expert was identified, the next step was to determine the costs for developing the curriculum. The process was time-consuming, and the resulting product was often too expensive for small or mid-sized employers to purchase. The frustrations that grew out of that experience lead to the premise of creating a shared national workforce development database.

The Database Becomes a Reality

In 1988 the idea for a national database was further developed by NETWORK: America's Two-year College Employment, Training, and Literacy Consortium. The database was to be supported, in part, through annual user fees and online charges, based on a model similar to Ohio's community college ONET system. To fund the cost of developing the database, acquiring equipment, and supporting programming efforts, funds were sought from the U.S. Department of Labor's Employment and Training Administration (ETA).

Throughout 1991 to 1993, discussions were held between NETWORK and ETA regarding the database's potential. The discussions centered on the purpose and use of the database, technical requirements, and costs. In the spring of 1994, ETA staff requested that NETWORK partner with the American Association of Community Colleges (AACC) to develop and implement the database as part of AACC's overall Workforce Development Project.

The AACC/NETWORK project staff entered into a series of meetings with the staff of the Department of Labor's Training

Technology Resource Center (TTRC). As part of the contractual arrangement, ETA had required that the database be housed at the TTRC as part of their overall national database initiatives. In turn, all programming support requirements for the project were handled by TTRC. The input provided by AACC/NETWORK staff helped to create the framework for the national workforce development database.

During the summer of 1994, data collection instruments were designed and developed by project staff. Each iteration of the survey was forwarded to TTRC, so potential programming pitfalls that might be created by the collected data could be identified. The survey was designed to be divided into multiple sections, which in turn would be answered for a variety of programs at each respondent college. Finally, the survey was field-tested by the NETWORK board of directors.

After reviewing the field test results, the survey was finalized and mailed to every community and technical college president or CEO in the country. To ensure an optimum response level, copies of the survey were also forwarded to AACC's Community College Workforce Development Liaison Group for distribution to community college business and industry liaisons throughout the country. The database went online in March 1995, with the initial data collection process yielding responses from 443 colleges and 2,777 public and private-sector programs.

Second-year data collection efforts have yielded updated program information from 175 participating colleges and new program information from 160 colleges. The new and revised program data is currently available with more than 600 colleges and 4,500 programs listed in the database.

Accessing the Database

Accessing the database is a relatively simple process, requiring a computer, modem, and access to a telephone. The database can be accessed through a toll-free number (800-767-0806) or through a Telnet connection (ttrc.doleta.gov). As of Aug. 1997, the database will be accessible through the TTRC's World Wide Web page.

Upon accessing the TTRC Welcome screen the user will be prompted to enter a Login ID. First time users of the database should use the Login ID: **"newuser"**. The user may then assign him/herself a Login ID and password of the their own choosing by going into User Registration. The registration process takes less than five minutes. It should be noted that new users are not *required* to register. Users can continue to access the system on an ongoing basis by simply typing in the **newuser** response upon entering TTRC each time. Registering does, however, provide some distinct advantages. It ensures that a TTRC user's package as well as ongoing updates will be mailed promptly to the registrant, and registered users are tracked on the system to aid in future database development and to streamline the data utilization process.

Once the user reaches the TTRC Main Menu, he/she will see a variety of database options to choose from. All databases housed within TTRC can be accessed by users and contain useful information. Additional information on those databases can be found by calling TTRC directly.

Using the AACC/NETWORK Database

Community college workforce development administrators, practitioners, and faculty who

are attempting to develop new programs or expand course offerings will find the AACC/NETWORK database to be extremely user-friendly. The database comprises two relational databases that contain data collected through the survey process.

The first database contains general college information from respondents. The general information section contains data on each participating college. Data includes the college's name, general address and telephone, and fax number as well as the names of key officers. Additional information is also provided regarding full-time enrollment, headcount, institutional classification, and the number of campuses or centers. These two tables contain aggregate information on all of the college's private- and public-sector program offerings.

The second database contains individual program information from respondent colleges. The program information section accesses the college's individual private-sector programs and public-sector programs. Program information is subdivided in this way to assist the user in the search process. Information contained within these sections includes the following:

- the name, address, and telephone number of each program;
- the name, title, and telephone number of the program's key contact and manager;
- a program description, including major program outcomes, a curriculum outline, types of equipment used in training, and instructional texts;
- companies or government agencies that have purchased the training;
- the number of individuals served by the program and the total cost of the program; and
- a table depicting program exchange information, including the availability of the curriculum, its cost (if any), and whether the key contact person or instructors are available for consulting.

Users have a number of ways to search the private- or public-sector program information. The first and most basic search option is for particular programs in a particular state. The user wishing to search by state would highlight that option and press **ENTER**. The user would then be prompted to enter a two-letter state abbreviation for the state the user is interested in. Once an abbreviation is entered, a table of contents of all public- or private- sector programs for that state is generated. The table of contents provides the name of the state and city the institution is located in, and the name of the program itself. At this time, screen size constraints prohibit the use of community college names for the roster of programs for each state. Each of these programs is accessible to the user by the view option in this section of the database.

Key-word or free-text searches of the database are also possible. These types of searches will look for a particular word, words, or phrase within each private or public sector program record. The user has the option of using a pre-loaded pick-list of search terms or creating a new one. The user also has the option of narrowing the search by choosing to search only private sector or public sector programs. This search option allows the user to access information more quickly. On-line "help" functions are available on every screen to answer any user question.

The Database and Employer Needs

The database is designed to be a resource in five major areas: private-sector workforce development, public-sector workforce development, resource development, economic development, and international workforce development.

Private-Sector Workforce Development

As a private-sector workforce development resource, the database can yield program information that can rapidly assist community college staff in meeting the training needs of a company. Once the college staff has met with an employer and identified the company's training needs, the action steps involved in using the database and structuring a program to satisfy the company's specific requirements are quite simple.

Private Needs

1. Identify workforce development need
2. Search database
3. Identify match to need
4. Call contact person
5. Discuss curriculum and instructor availability
6. Modify curriculum
7. Deliver service

Public-Sector Workforce Development

The database is also a public-sector workforce training resource. The process below demonstrates that once a community college staff member has identified the training needs of a public-sector entity, the database can be rapidly searched to identify training programs at other colleges. These programs can then be quickly and cost effectively imported to meet the agency's need.

Public-Sector Needs

1. Identify training need
2. Search database
3. Call contact person
4. Discuss curriculum and instructor availability
5. Import curriculum and/or instructor
6. Modify curriculum
7. Deliver service

Resource Development

The database can be used as a resource development tool in responding to requests for proposals (RFPs) for workforce development training. The database contains information on community college-based programs that are sponsored by state or local government agencies. Funding for these agency programs comes from the U.S. Departments of Labor, Education, and Housing and Urban Development as well as Health and Human Services. When responding to RFPs originating from these agencies, community college staff can identify and import programs from other colleges that closely match those programs being sought. By contacting the resource development staff member or the grant writer at the college identified in the database, a community college staff member can request a copy of the proposal that the institution submitted to the government agency for funding consideration. The already submitted proposal can then be used as a guideline for

responding to the new state or local government RFP.

Resource Development Needs

1. Identify funding source program guidelines
2. Decide on programs to be offered
3. Search database for programs
4. Call contact person
5. Discuss curriculum availability
6. Modify curriculum
7. Include modified curriculum in proposal

Economic Development

The database is also an excellent economic development resource. For example, Independence Community College in Independence, KS, has proved that the database can make a difference in meeting the needs of a potential employer. Independence College, as part of a local economic development effort with the local Chamber of Commerce, used the database in responding to a request for an economic development proposal. The RFP came from the Cessna Corporation, which wanted to build a manufacturing facility in the community. The college told Cessna that the programs in the database that were available for free or at a nominal cost were an extension of the programs and services that were available to the company, their employees, and the families of employees.

College staff conducted a search of the AACC/NETWORK database for all training delivered in support of aircraft manufacturing and all training that was delivered to known aircraft manufacturers. The City of Independence was awarded the bid as a result of the information provided by the database, information that was adapted to Cessna's needs by Independence College and the local Chamber of Commerce.

Economic Development Needs

1. Identify employer training needs
2. Search database
3. Identify match
4. Call contact person
5. Discuss curriculum availability
6. Review findings with employer
7. Incorporate findings into strategy for employer
8. Deliver service

International Workforce Development

As an international workforce development and resource development tool, the database can be used to identify programs and services that can be delivered abroad in support of community college projects. The database can be used to identify potential partners who can deliver college-developed programs to employers based overseas.

The Future of the Database

A New Look

The most important change to the database will be the addition of a World Wide Web page site. This site will contain all of the information presently found at the Telnet location and more. The new look will enhance the readability of database charts and tables. In addition, a World Wide Web presence for the database will

allow for greater access to those individuals and institutions without Telnet software. The database will also support new graphical hypertext links to the college's themselves. These links will allow the user to jump to a college's homepage with only a click.

Faster Searches

Part of the new World Wide Web platform for the database will include tools to make conducting a search faster and easier. Through an increased pick list and the point and click capabilities of the Web, users will be able to get to the program e-mail requesting additional information. These tools alone should provide the information they need quicker. In addition, users will be able to click on a program manager or key contact and instantly send, reducing significantly the time spent searching for curriculum. TTRC staff are also working to develop several management reports that can be generated from the database for community college research-related applications.

Easier Updates

The primary goal of the project is to keep the information in the database as current as possible. Ideally, information contained in the database should be updated annually. To achieve this goal more efficiently and more effectively, institutions will be able to update their information on-line. Those institutions without Internet access will still be able to use a paper and pencil survey instrument. Keep in mind, a maximum of two years of data on each program will be stored in the database. *Information two years of age or older will be deleted from the database and archived for up to two additional years.*

Based on the findings of the National Workforce Development Study, the opportunity for America's community colleges to expand their provision of workforce development programs and services seems endless. However, the study also reveals that community colleges must bring their affordable training programs to the market without delay. Astute colleges will use all their available resources to be successful in workforce training. The AACC/NETWORK curricula database is destined to become a major asset to those colleges seriously involved in workforce and economic development training.

CHAPTER 4

Rethinking the Role of Instruction for Workforce Training

The National Workforce Development Study confirms the value of the nation's community colleges as workforce training providers. The extent and areas of concentration of the training are chronicled in the results. What is not chronicled to the same degree are the implications of these findings for instructional practitioners. The goal of this chapter, therefore, is to examine, from the practitioner's perspective, some of the concepts that they can put to use in their everyday world of instruction in community colleges.

The chapter is divided into two sections. First, the changing role of instruction is discussed in the context of three factors:

- the characteristics of the continuum of community college learners;
- the knowledge revolution and the new roles of business and education; and
- the changing nature of work as a result of the knowledge revolution.

Second, eight recommendations are advanced that, if adopted, could help community colleges secure their role as the acknowledged leaders in workforce training.

The Changing Role of Instruction

Continuum of Community College Learners

The community college serves four distinct student groups: 1) the *emerging* workforce learner; 2) the *existing* workforce learner; 3) the *transitional* workforce learner; and 4) the *entrepreneurial* workforce learner. Together, these groups form a workforce learning continuum upon which community colleges can design their offerings.

Emerging workforce learners, the first student group, can be described as "green peas." They are 18–22 years old and are preparing for a first career; they are most commonly referred to as "traditional" students. They are the group around which community colleges have tended to design their systems and methods of instruction. Only recently have community colleges begun to seriously address other student segments, especially those in the existing workforce.

Second is the *existing workforce learner*, a full- or part-time employee who needs education to remain competitive on the job. This learner, seeking additional education and training about his or her job, is part of the sector of education currently experiencing explosive growth—the education of employees (Davis and Botkin, 1994). This growth comes as a result of employers who worry not only about the skill level of workers in the future but about keeping the skill levels of the present workforce current.

Many employers are turning to community colleges to obtain customized workplace training that is often short term, cutting edge, and specialized. As a result, community colleges have had to change their concepts of instruction to accommodate this rapidly growing market. Working with this existing workforce can be a golden opportunity to expose faculty and administrators to state-of-the-market training requirements and cutting edge technology. However, the college unit with which most community colleges successfully serve these learners, a continuing education department or business institute, is often left "at the edge" of the institution. The instructional gains realized through working with the existing workforce, therefore, do not often permeate or benefit the rest of the institution, particularly course-based instruction.

Transitional workforce learners, the third group, are best described as those individuals who are transitioning into the workforce because they have been downsized, rightsized, or disenfranchised in some way. They require their education to be delivered in a results-oriented manner. Sometimes, it means education about how to get the next job or select a different career. At other times, it means fast-track, relevant training that leads to immediate employment.

This type of education and training, largely taught by a college's continuing education department, has implications for the curriculum instructional unit of the college. Responding to urgent needs and with non-bureaucratic support systems are keys to success. Education in 15 weeks or in two-year packages may not work. Not only may time frames need to be refashioned but also course content. In this arena of education and training, choices about "need-to-know" and "nice-to-know" content have to be made, especially when time and money are limited. For instructors and administrators, responding to these requirements poses learning opportunities as well, i.e., learning through making changes that enhance flexibility and focus on the customer. If education is truly lifelong, this learner group and all the other groups will return to be educated many more times, be it at a community college or one of its competitors. Responsive-ness will dictate to whom this learner group returns.

The fourth group, *entrepreneurial workforce learners*, can and should push the instructional units of community colleges very hard to make their education relevant. These people are starting or already own their own businesses, one of the fastest growing business and

job market segment in America. Whether the instruction is credit or non-credit is not as important to this group as the relevancy and immediacy of the instruction.

While education has defined the learning market in four segments, business defines the learning market a bit differently as a result of today's information age. According to Davis and Botkin in *The Monster Under the Bed* (1994), the marketplace for learning is being redefined dramatically to one of lifelong learning. Instead of K-12, learning is K-80+. The major segments of this learning marketplace are customers, employees, and students, in that order. No longer can education be exclusively "front ended" as it was in the agrarian society for ages seven to 14 or as it was in the industrial society for ages five to 22. In the information economy, the rapid pace of technological change means that education must be updated throughout an individual's working lifetime. Lifelong learning is the norm that is augmenting, and in some cases displacing, school-based education.

It is predicted that the student market, the traditional emerging workforce learner, will remain largely in the public sector and that school leaders will continue to try to reform the old system rather than embrace the new forms that will ultimately prevail (Davis and Botkin, 1994). Only recently discovered by educators, for example, is the rapidly growing "shadow market of education." In contrast, big business has recognized the value of employee education for some time. Motorola spends $120 million a year on education, and Saturn requires 100 hours per year of formal learning by its management and union employees. Indeed, continuous education and training is the very foundation of the movement toward quality improvement in corporate agencies.

The "newest and largest learning segment in the twenty-first century," (p. 17) made possible by user-friendly advances in technology, is predicted by Davis and Botkin (1994) to be consumers. As information technology becomes intrinsic to products and services, learning becomes a by-product, and by-service, of the customers' world. Customers become learners, and businesses become educators. In the years to come, businesses will add knowledge-based features to their products, increasing their economic value to the company and the customer (Davis and Botkin, 1994). For example, an insurance broker recently purchased some upgraded software. He was told that training on the product was included in the purchase price. A few days later, he received a call from a trainer to schedule his customized lesson.

These technologies and new market perspectives have profound implications for community colleges. Without serious customer-delivery change, community colleges will no longer have the corner on the market for learning. To keep pace, community colleges need to examine themselves in the context of the knowledge revolution and the new roles of business and education.

The Knowledge Revolution: The New Roles of Business and Education

The knowledge revolution, brought on by technology, is one in which learners can obtain education directly and bypass formal schools. For three of the four student groups already described—the transitional, entrepreneurial, and existing workforce learners—this course of action is especially attractive. These learners do not require the validation of a degree because they are not necessarily preparing for their first jobs

like the emerging workforce learners. As a result, providers of learning for these segments will proliferate, and formal educational institutions will begin to experience growing competition for these three markets. Business has already seen the economic value of the knowledge business, and they are putting data and information to productive use by creating knowledge-based products and services that make their customers smarter.

What will community colleges and other schools do in response to these competitive challenges? They might consider organizing around and harmonizing with emerging information-age values: service, productivity, customization, networking, speed, flexibility, and a global perspective. If customers and suppliers can now get into the core of a business and learn how to obtain information, i.e., if they can self-track a package with Federal Express, how can they get into an educational organization to electronically obtain the course they desire? Many colleges have figured out the answer to the question, an example of how customers as learners are changing their expectations. To improve instructional practices further, colleges will have to incorporate not only information-age values but also businesslike practices. Davis and Botkin suggest implementing these practices and call them the "six Rs: risks, results, rewards, relationships, research, and rivalry (competition)" (Davis and Botkin, 1994).

The Changing Nature of Work

Understanding the continuum of learners in the market and the impact of the changing roles of business and education in the community college are two of three factors worth examining when considering the future roles of community college instruction. However, the examination is incomplete without considering the third factor, the changing nature of work that is a result of the knowledge revolution. The National Workforce Development Study featured in this book maps out the training that employers say they need most—right now—and projects, to a certain extent, training needs for the near future. Obviously, the knowledge revolution has implications for changing the nature of work for employers, employees, and society beyond 1999. Educational institutions will need to consider these implications, so they can plan for the future educational needs of their constituencies.

In Jeremy Rifkin's book, *The End of Work*, Rifkin cites examples of the changing nature of work in several economic sectors. In the agricultural sector, he describes the migration from farming to "pharming." One example of pharming takes place at Escagenetics, a company in California that has isolated the genetic codes necessary to produce vanilla in bacteria vats in a lab. This molecular farming, which applies biotechnology, eliminates the roles of and dependence upon the soil, weather, and farmer as we know them (Rifkin, 1996). This example begs at least two questions: What ought to be in the instructional portfolios of community colleges now and in the future? Are we properly preparing our continuum of learners, knowing many of the jobs we train for now will disappear in the near future?

In the world of manufacturing, one robot can now replace four jobs. If used 24 hours a day, that robot will pay for itself in one year. Rifkin predicts that blue-collar jobs as we know them will pass from history by 2025. What are the implications for community college training

programs in the future if Rifkin's scenario has validity?

The service industry absorbed manufacturing jobs for 40 years. Information technology now replaces these service sector jobs as well. Voice-recognition robots have enabled AT&T to handle 50 percent more calls with 40 percent fewer operators. Banks eliminated 177,000 tellers from 1983–1993. The retail sector of the workforce has just begun to see the effects of the technological revolution. Since the concept of electronic shopping was developed and became accessible, 419,000 jobs in retail have been lost.

Warehousing and transportation has also been affected. Even more changes will occur as the electronic transmission of products takes hold. Blockbuster Video and IBM's joint venture in 1993, New Leaf Entertainment, is one example. Soon each Blockbuster store will have a kiosk where customers order selections by touching a computer screen. The information is then transmitted back to the store within minutes, and the store's machines copy the electronic information into recordings on compact disk or cassette. This is a just-in-time, customized, customer-focused product that is delivered on-site (Rifkin, 1996).

This process signals the end of work for many warehouses, wholesalers, and truckers. As these jobs are being replaced by a few highly specialized ones, what are the implications for community colleges? Will they be able to rapidly develop training products that are state-of-the-market, highly customized, and even entertaining? Some have already considered collaborations with cable companies, which will deliver the products. For example, the Colorado Community Colleges have a partnership with Jones Cable as does the League for Innovation in the Community College. At the same time, learning products such as disks are now available from retail stores. The Internet has come to play an increasingly larger role in education and training.

Additional questions naturally follow. How will college-produced educational disks or cassettes compare with those of Blockbuster? Or should they? The businesses of education and entertainment may very well merge. Davis and Botkin (1994) call it "edutainment." Will Disney become the biggest competitor of community colleges if it gets into the education business? Davis and Botkin have warned that the economic value of education has already been recognized by business.

These questions suggest recommendations. Having considered these three factors—the continuum of workforce learners, the knowledge revolution and the role of business, and the changing nature of work—eight recommendations for the role of instruction in community colleges follow.

Recommendation 1: Reform and Restructure

Reform and restructure the college, especially how instruction is organized. Most community colleges today are divided institutions that have a credit unit on one side of the organization and a non-credit, entrepreneurial unit on the other side. They are structured around their funding, whether it is state- or self-supported, rather than around the markets of learners they serve.

Several enlightened colleges have begun to reform and have restructured themselves with their markets in mind. Lane Community College in Oregon is one example and Valencia Community College in Florida is another.

Central Piedmont Community College in North Carolina is a third example. It has begun

to "incubate" or develop credit programs in the Corporate and Continuing Education unit. For example, the college's insurance and real estate programs plan and execute programs that are credit, occupational extension, and non-credit for all four groups of workforce learners, across the continuum. Full-time faculty and staff are instructed and then coached on the entrepreneurial practices necessary to compete, promote, and develop viable programs. One of the programs that was in decline grew over 30 percent after "incubation" in the entrepreneurial corporate and continuing education unit. Exposing faculty and staff to sound marketing practices that are customer-based and market-driven paid off. In addition, academic rigor was not compromised. The programs grew, and the pass ratios on licensing exams soared, one of the benchmarks for program success. It is recommended, therefore, that the entrepreneurial units *incubate* traditional credit programs rather than force traditional programs to immediately assimilate entrepreneurial practices.

Recommendation 2: Retrain the Community College Workforce

Faculty who are trained to teach all along the continuum of the four workforce learning groups enrich themselves and their teaching and become more valuable and flexible employees. At present, most faculty dispatched to teach industry employees are part-time industry professionals, and their wisdom and experience stays outside the institution. If full-time faculty are to expand their capacity to teach all along the continuum of learners and if management is to manage the process along the continuum, both need retraining. The comments of deans/directors in the National Workforce Development Study contained in this book suggest that faculty training in industry develops the practitioners sought by industry to train its learners. Such comments suggest the value of a periodic return to industry. The same might be said for management. Retraining of this nature for faculty and staff may well enable colleges to compete and obtain, or maintain, their acknowledged leadership in workforce development.

Many colleges merely tinker with their systems and their staffs. They do not always focus the staff and faculty training to serve sectors beyond the traditional or emerging workforce learner. If community colleges are to train business and industry's workforce, present and future, as they reengineer and strive to compete, community colleges can do no less for their own workforce.

Recommendation 3: Reduce "Brick and Mortar" Growth and Consider Alternative Delivery Formats

Community colleges now need to consider alternative delivery formats, not only with speed but with "smarts." There is, and will be, stiff competition for existing, transitional, and entrepreneurial workforce learners from business, industry, and entertainment. Even the segment of traditional students, the 18- to 22-year-old emerging workforce learner market, will never reach the baby-boom proportions of the past. Competition within higher education for this market will be fierce. Therefore, a well-planned venture into viable niches, using alternative formats such as the Internet, computer-based instruction, virtual reality, and the plethora of others, could have payoffs. Picking the right niches and partnering in this venture are the operative components. It is recommended that

colleges pick the areas in which they excel and then develop alternative formats in those areas, if competitors have not already done so. Partnering with other colleges or business or industry can help supply the financial resources needed to pay for these new ventures.

Recommendation 4: Emphasize Relevance

The time, the place, the format, and, especially, the content developed must be state-of-the-market and relevant to the described diverse learners. Dr. Tom Leitzel of Central Piedmont Community College in Charlotte, NC, has been working with occupational faculty to "unpack" the credit occupational curriculum into smaller modules. In order to accomplish this task the Instructional Performance Systems Incorporated (IPSI) software is being used. The intent is to gain sufficient flexibility to enable faculty to reformat courses into new and smaller time-frames. For example, the content of a blueprint-reading course can be broken into modules that are relevant to workers on a plant floor who must learn how to translate the instruction immediately into aspects of their everyday work. They may not need the traditional 40 clock hours of the regular course, but they do need 10 hours of specific information contained in a customized module, one that focuses on the skills needed at that time.

Recommendation 5: Risk!

To revolutionize and not merely tinker with the existing instructional system requires risk. Consider the fact that the discrete units inside and outside higher education that create, supply, and distribute or deliver knowledge are merging. This phenomenon suggests that colleges create, sell, produce, market, and joint venture with business the knowledge they normally only "dispense." To do so requires new training structures and systems. The revenue produced by the merger of disparate functions may offset other institutional demands (Davis and Botkin, 1994). It will require bold steps to get into this new kind of business, this *changed* way of doing things. It will require risk. And, risk-taking has not been the nature of higher education and its workforce.

Recommendation 6: Benchmark the Competition

Too often educators look at other educational institutions to judge themselves. They should also examine how other competitors, such as businesses, are training. Large accounting firms, for example, have added training to their portfolio when providing consulting services to customers. This scenario can be viewed as competition and as a threat, or it can be viewed as an opportunity for a partnership. Consider examining what the local independent training consultants, the suppliers and distributors, are doing with respect to training. Many of them have added consultative selling to their portfolio of business services, as has the St. Louis Community College's Business and Industry Department. Competition from "edutainment" is also worth examining; it is competition from which to learn. Community colleges must determine what else or who else competes for the educational time and money of their customers. As learning organizations, community colleges must *learn from their competition.*

Recommendation 7: Repackage and Remarket Products

A course such as phlebotomy, for example, can be packaged with nutrition and nurse aid training

to form the patient care technician certificate. Mary Kotsokalis, Director of Health Care Programs at Central Piedmont Community College in Charlotte, NC, surveyed the market and recombined classes (with proper nursing and state approval) to develop this new hybrid. To date, the classes have been full and the demand high for this type of worker. Employers provide part of the input about program effectiveness and attend the combined graduation/job fair, the program's culmination. The result for graduates is often instant employment.

When colleges complete scans of their environment on a frequent basis, and inventory and update their portfolio of offerings, the possibilities for remarketing and repackaging their programs are high. In many cases, remarketing and repackaging are simple matters of seizing opportunity: carpe diem! It takes more ingenuity than money.

Recommendation 8: Collaborate and Joint Venture

Community colleges must collaborate within their own institutions. The National Workforce Development Study indicated one of the biggest barriers to a college's progress with business and industry was the existing internal competition and the lack of customer-, client-, and student-focused attitudes. Offices across the college—facilities management, registration, and purchasing, for example—have often developed systems and procedures based on the traditional student. Acknowledgment of the broader continuum of learners is necessary and begins with the college's leadership. It should be followed with the appropriate education, training, and support required to change outdated systems and harmful attitudes.

Consider collaborating outside the college with businesses in the college's region to open training centers, an idea that was chronicled in the National Workforce Development Study. Conduct joint ventures with instructional designers, suppliers, other colleges, and other appropriate partners to develop new products and delivery systems, be they on the Internet or on "nets" not yet even realized.

Conclusion

Several of the recommendations in this chapter are fairly radical, and they are meant to be. Rapid changes in technology, the increasingly stiff competition for providing workforce education and training, the sweeping alterations to the nature of work, and country's need for the skills of diverse workforce learners cannot wait for community colleges to "tinker" or be timid in the way they change their approach to education for all their constituencies. These times call for bold steps as outlined in the recommendations in this chapter and in the concluding chapter of this book. The colleges that are able to take these steps will be the survivors and players in the knowledge revolution. They will secure their role as the nation's workforce development leaders.

References

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CHAPTER 5

Survey of Employers

Driven by advanced technology, fast-paced innovation, heightened global competition, and changing demographics of the American workforce, the workplace in America is changing rapidly and profoundly. Concepts such as new and emerging technology, participative management, statistical quality control, and just-in-time production—previously known to a few—are now common vocabulary in today's corporate boardrooms. The level and types of skills needed by the workforce to accommodate this transformation are often dramatic. The new workplace requires adaptive and innovative workers with strong interpersonal skills. Emerging and existing workers will be expected to have as broad a set of skills as was previously required only of supervisors and management. Together, emerging and existing workers will be called upon to upgrade these skills regularly. Career changes several times during a lifetime will be common; lifelong learning will become the educational standard.

The demand for education, training, and retraining, created in the rapid pace of workplace change, is often met through the nation's system of community colleges. Over the past three decades, America's community colleges have provided high-quality workforce education and training to American-based businesses and organizations. Nearly all of American community colleges (96 percent) offer workforce education and training programs and services (Doucette, 1993). Through these efforts, American-based businesses and other organizations have been strengthened in their effort to succeed and survive in today's technologically advanced, culturally diverse, and global economy.

In large part, due to the positive experience of American-based employers with workforce development programs and the community college presence in every corner of the nation, America's community colleges have emerged as

the most logical provider of workforce development, education, and training. In partnerships with business and industry, government, and other service providers, America's community colleges comprise a high-quality, cost-effective, responsive workforce development delivery system. This system will help lead the national effort to ensure that the American workforce is the most skilled and adaptable workforce the world has ever seen. The results of the National Workforce Development Study will assist American community colleges in their quest to become ever more effective as a pre-eminent workforce development delivery system for this country. The results will also suggest how business and government can partner with community colleges to meet the workforce challenges of the 21st century.

The workforce development systems that are the focus of this study include the customized education, training, and retraining needs of business and industry. However, the important role of America's community colleges in workforce development encompasses much more. Examples of other community college programs, related directly to workforce development, include

- credit/degree-granting technical and vocational programs,
- adult apprenticeship training,
- continuing education work-related classes,
- professional development programs,
- Small Business Development Centers,
- Tech-Prep programs,
- School-to-Work transition programs,
- youth apprenticeships,
- workplace basic skills/literacy programs, and
- cooperative education, among others.

For the purposes of this study, the term *workforce development* is used interchangeably with *workforce education and training*. It is defined as those activities designed to improve the competencies and skills of current or new employees of business, industry, labor, and government (American Association of Community Colleges, 1993). Such training is typically provided on a contract basis with the employer who

1. defines the objectives of the employee workforce education and training,
2. schedules the duration of the training,
3. specifies the delivery mechanism by which training is provided, and
4. delineates the competencies of the trainer.

Workforce development is customer-driven, involves payment by the customer to the training provider, and is usually linked to some economic development strategy of the employer (Jacobs, 1992).

The idea for the study and the manner in which colleges elected to participate evolved over time. The idea for this research originated with Tony Zeiss, who is now president (but who was then President-elect) of COMBASE, an association of community colleges that focuses on providing the best in community-based education. He was joined immediately in developing the idea by Jack Wismer, then president of the National Council on Community Services and Continuing Education (NCCSCE). The organization has since changed its name. It

is now known as the National Council for Continuing Education and Training (NCCET). Zeiss then enlisted the efforts of three colleagues from Central Piedmont Community College to help drive the research: Phyllis Barber; Sherrie Kantor, a member of NCCET and the vice president of the National Council for Occupational Education (NCOE); and John Quinley.

In the early stages of the data collection phase, preliminary results were shared with James McKenney, Director of Economic Development for the American Association of Community Colleges (AACC). McKenney enthusiastically offered his full support and suggested ways to extend the geographical span of the study's sample. As interest in the project grew, NCOE and its president at that time, Pat Donohue, joined as sponsors of the research. In addition, Andrew Meyer, president-elect of NCCET joined the effort. Meyer also represented the Deans and Directors of Continuing Education in Maryland, agreeing to allow data from a similar study conducted in Maryland just prior to this national study to be integrated with the results of the National Workforce Development Study (National Study).

Purposes of the Study

This research seeks the perspectives of two key workforce constituencies: American-based employers—the recipients of workforce education and training—and the deans and directors of continuing education at American community colleges—the providers of workforce education and training. These groups were asked to shed light on two basic questions:

1. What are the workforce education, training, and retraining needs of businesses and organizations in America?
2. How can American community colleges best meet these needs?

Several basic purposes of the study cluster around these two questions; they are described below.

- *To explore the extent and nature of workforce education, training, and retraining needs of the current and future American workforce.* The study asked employers to estimate the proportion of their workforces that needs additional workforce education and training and to indicate the extent that training is needed in specific areas. In addition, the study asks employers about whether workforce programs should include non-credit, credit, or both non-credit and credit classes; about their goals for workforce development; about the distance learning approaches to training that would most benefit their companies; and about the effect that changing technology has on their need for workforce education and training.
- *To determine the value of community colleges for federal and state policymakers and the public in providing workforce education and training.* In 1993, The League for Innovation in the Community College asked the administrators of workforce education and training programs to evaluate their effectiveness (Doucette, 1993). In the same year, AACC and the U.S. Department of Labor collected data concerning workforce development issues from hundreds of representatives of community colleges, business and industry, and state and local governments at seven regional forums (Falcone, 1994). In

recent years, Michigan, Maryland, and Iowa conducted surveys of employers served by workforce development programs in their respective states, asking respondents to evaluate the effectiveness of the service provided (Wismer and Zappala, 1993; Clagett, 1995; Iowa Association of Adult and Continuing Education Deans and Directors, 1996). In fact, the data used to write the 1996 Iowa Workforce Training Study is a subset of the National Study data. The National Study research team provided data from the community colleges in Iowa to enable the Iowa Association of Adult and Continuing Education Deans and Directors to produce the Iowa study.

However, until the National Workforce Development Study was conducted no national study had been conducted that (1) determined employer perceptions of the effectiveness of community college workforce education and training programs and (2) analyzed the perceptions of deans/directors responsible for implementing workforce education and training programs. In the National Study, employers were asked why they would select a community college to meet their workforce development needs. Employers and deans/directors also rated American community college workforce development programs on several dimensions of program and student outcomes, and the employers reported whether they would recommend community college programs to other businesses and organizations.

- *To identify factors that contribute to the success of workforce education and training as well as factors that were seen as barriers working against success.* These factors were detailed in written comments and in responses made by employers in the survey of employers served by community colleges. The factors were also addressed in analytical summaries written by the deans and directors of continuing education. One summary provided an analysis of factors that support and rise to challenge the success of workforce education and training programs. The other summary described success factors as detailed in a description of an exemplary practice at the college. These summaries often addressed the respective roles of community colleges, business and industry, and government in the workforce development effort.
- *To present the national results and discuss the implications for community colleges of being the nation's pre-eminent workforce education and training delivery system in state and national legislative bodies.* The authors anticipated that the results of the National Study would support, and in some cases may extend, the workforce education and training recommendations as detailed by AACC in the organization's policy statement on workforce development, *The Workforce Training Imperative: Meeting the Training Needs of the Nation* (1993).

The Study's Methodology

Sampling Approach

In the spring of 1995, the initial invitation to participate in the National Workforce Development Study was extended to all member colleges of NCCET and COMBASE. A cover letter explaining the purposes and procedures of the study, the employer survey instrument, and examples of the requested one-page summaries were sent to approximately 350 colleges who were members of one or both of these AACC councils. The cover letter was signed by the

leaders in the two councils: Tony Zeiss, then president-elect of COMBASE, and Jack Wismer, then president of NCCET.

Over time, several colleges who were not members of NCCET or COMBASE learned of the research and sought to join in the study. The entire 15-college system in Iowa elected to participate. After meeting with McKenney in the fall of 1995, the research team decided to seek participation from colleges located in states that were not represented in the study's sample and to include the top leadership of NCOE and its member institutions not already participating in the study. Approximately 75 additional letters of invitation to participate in the study were sent. Finally, Andrew Meyer, project coordinator of the Maryland Community College Workforce Training Evaluation and Needs Assessment Survey, received permission from the Maryland Association of Deans and Directors of Continuing Education/Community Services to merge the data from their recently completed study with the data from the National Study. Craig Clagget, author of the Maryland study, provided the data on disk with a description of the data elements. Since the National Study was in large part based on earlier state studies, such as the one conducted in Maryland, considerable overlap among questions existed.

Sample Size

Almost 10 percent of all community colleges in the nation participated in the National Study. The study included 104 colleges from 27 different states. The number of colleges participating by state and region is provided in Table 1. Appendix E, List of Participating Colleges, provides a list of individual colleges participating in the study.

Table 1. Number of Participating Colleges by Region and State

REGION AND STATE	NUMBER OF COLLEGES
Total: All Regions	**104**
East	
Massachusetts	4
New Jersey	4
New York	2
Pennsylvania	3
Rhode Island	1
Maryland	18
Total: # East	32
Midwest	
Iowa	15
Illinois	6
Kansas	3
Michigan	5
Mississippi	1
Missouri	1
Nebraska	2
Ohio	2
Wisconsin	2
Total: # Midwest	37
South	
Alabama	2
Florida	6
Kentucky	1
North Carolina	5
South Carolina	2
Texas	9
Virginia	4
Total: # South	29
West	
California	1
New Mexico	1
Oklahoma	1
Oregon	1
Utah	2
Total: # West	6

Approaches

The study's methodology used two approaches. The first was a survey mailed to American-based employers who received workforce education and training services from community colleges. The second was a request to for deans and directors of workforce education and training programs to write two, one-page summaries concerning their perspectives on workforce education and training.

Survey

The survey instrument was based on similar instruments successfully used in Maryland (1991); Michigan (1991); Iowa (1991); and North Carolina (1994). In the survey component, colleges identified the businesses and organizations they served in the 1994-1995 academic year through workforce education and training programs. In a few cases, employers who were not previously served were included in the sample. Colleges sent these clients the three-page survey with a cover letter from the college president or the dean/director of continuing education. The survey included multiple-choice items and an open-ended comment question. Appendix F, Workforce Training Survey, provides a copy of the survey.

Summaries

The second part of the research study consisted of two, one-page summaries written by the deans and directors of continuing education. Summaries include

1. a description of the college's most exemplary workforce education and training program, and
2. an analysis of factors that promote or impede the success of the college's workforce education and training programs.

Response Rate

Of the 4,703 surveys that were sent to American-based employers, 2,473 were returned, for a response rate of 52.6 percent. (Thirty-five surveys, returned after the analysis was begun, were included in the calculation of the response rate but were not included in the analysis of results.) The number of employer responses by college ranged from a low of three to a high of 145; the average number of employer responses by college was 24. The responses from the Maryland study were included in the National Study when individual questions were identical or close enough to combine.

Fifty-six of the deans and directors of workforce education and training programs (53.8 percent) returned the two, one-page analytical summaries.

Results from the Survey of Employers

The results as detailed in the employer responses to individual questions in the survey as well as written comments made by employers are presented in this chapter. The results from the summaries written by the deans/directors of workforce development programs are provided in Chapter 6.

Types and Sizes of Businesses and Organizations Served

Community colleges provided workforce education and training to employers in all types and sizes of business, as shown in Table 2. The

Table 2. Primary Types and Sizes of Businesses or Organizations Served

Type of Business	Freq.	Pct.	Size of Business by no. of employees	Freq.	Pct.
Construction	67	2.7	1–10	245	10.4
Retail/Wholesale	83	3.4	11–25	205	8.7
Professional services	108	4.4	6–100	15	6.0
Industrial/Manufacturing	861	35.3	101–500	763	32.3
Health services	339	13.9	501+	533	22.6
Hospitality services	14	0.6			
Transport/Commun/Utility	126	5.2			
Finance/Insurance	128	5.2			
Agricultural-related	49	2.0			
Government/Public	424	17.4			
Miscellaneous services	15	0.6			
Other	234	9.6			

NOTES:

1. If an employer checked more the one type of business, each choice was counted.
2. Percentages may not total 100 percent due to rounding.
3. As is always the case in survey research, not all respondents answered every question. However, the variation in the number responding to each item (except where noted in the text) was small. Further, the total number responding to the survey was large—almost 2,500 individuals. For this reason, in most cases, the number of respondents for each survey item are not provided with the percentages as shown in the figures and tables.

greatest concentration of services was provided to industrial/ manufacturing employers, totaling over one-third (35.3 percent) of all employers in the survey. Following this type of business or organization were government/public (17.4 percent) and health services (13.9 percent). These three areas accounted for two-thirds (66.6 percent) of all employers responding to the survey. The remaining categories accounted collectively for 33.4 percent and individually for nine percent or less of the total responses.

By size, just under one-half (45.1 percent) of the companies and organizations were small, defined in the study as 100 or fewer employees. Just under one-third (32.3 percent) of the respondents were mid-sized (from 101 to 500 employees). Large establishments (501 or more employees) represented slightly more than one-fifth (22.6 percent) of the total number of employers served by community colleges. Very small companies (one to 10 employees) represented 10.4 percent; companies with 11 to 25 employees, 8.7 percent; and establishments with 26 to 100 employees totaled 26.0 percent.

The Need for Workforce Development

Some estimates indicate that as much as 75 percent or more of the existing American workforce will require significant job retraining

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Table 3. Definition of Composite Skills Areas

Technical skills	Environmental science, advanced math/science/engineering, blueprint reading, statistical process control
Computer skills	Word processing, spreadsheets, database, CAD/CAM, programming languages
Business skills	Business writing, marketing, customer service
Professional development	Basic supervision, total quality management, time management
Communication skills	Reading, writing, math, listening, and speaking
Computational skills	Basic math, charts, & graphs
English as a Second Language	Non-native English speakers
Interpersonal skills	Interacting with others, working in teams
Government regulations	OSHA, EPA, IRS, hazardous waste, employee harassment
Critical thinking skills	Problem solving, creativity, learning how to learn
Global understanding skills	Understanding world geography, diverse cultures, people
Personal skills	Responsibility, self-esteem, integrity, and honesty
Other skills	Please describe

in the next decade and that 80 percent of the new jobs created in those years will require at least two years of postsecondary education (Dilcher, 1993). The American Society for Training and Development reports that 49.5 million workers will need additional training within the next 10 years to keep pace with employer skill demand: 16 million in technical training; 5.5 million in executive, managerial, and supervisory training; 11 million in customer-service training; and 17 million in basic skills training. In addition, 37 million emerging workers will need entry-level education and training (U.S. House Committee on Science, Space, and Technology, 1991).

Consistent with the 1991 and 1992 national findings, the businesses surveyed in the National Study reported that a substantial proportion of their current workforce needed additional training (See Figure 1). (All figures can be found at the end of this chapter.) More than one-fifth (22.2 percent) of the employers estimated that from 76 percent to 100 percent of their workforce needed training. More than one-fourth (25.1 percent) of employers estimated 51 percent to 75 percent; 31.6 percent of employers reported from 26 percent to 50 percent; and 21.1 percent of employers estimated from zero to 25 percent of their workforce needed training.

Specific Workforce Development Needs

Each employer was asked to indicate the extent of their company's training and retraining needs for specific skills areas. Respondents checked "not needed," "needed," "much needed," "don't know," or "not applicable" for each of 12 specific skills areas. The areas were defined

Table 4. Specific Workforce Education and Training Needs of American-Based Companies

Skill Areas	Not Needed (in %)	Needed (in %)	Much Needed (in %)	Don't Know (in %)	Not Applicable (in %)
Technical skills	28.9	43.3	14.5	4.6	8.7
Computer skills	12.4	55.0	29.0	1.9	1.7
Business skills	20.6	56.6	14.4	4.7	3.8
Professional development	8.9	58.6	28.8	2.5	1.2
Communication skills	20.9	52.7	21.2	3.7	1.5
Computational skills	34.1	44.3	9.6	6.8	5.2
English as a Second Language	72.8	13.4	3.2	3.6	7.1
Interpersonal skills	16.1	58.6	21.4	3.1	0.8
Government relations	27.0	55.3	10.5	4.7	2.5
Critical thinking skills	17.9	57.4	17.7	5.2	1.7
Global understanding skills	51.3	27.2	3.7	7.9	10.0
Personal skills	24.9	53.1	12.5	7.2	2.2
Other skills	23.8	16.7	17.2	20.4	21.9

as composite skills groups, explained in Table 3.

The need for additional skills training in specific areas was uniformly high as shown in Table 4. Of the 12 areas provided as response items, 10 were thought to be "needed" or "much needed" by 50 percent or more of the employers. Specific skills areas needed most (defined as 75 percent or more of employers indicating these areas were "needed" or "much needed") were professional development (87.4 percent); computer skills (84 percent); interpersonal skills (80 percent); and critical thinking skills (75.1 percent). Specific skills areas needed at a second level (defined as 50 percent to 74 percent indicating "needed" or "much needed") were communication skills (73.9 percent); business skills (71 percent); government regulations (65.8 percent); personal skills (65.6 percent); technical skills (57.8 percent); and computational skills (53.9 percent). Specific skills areas needed relatively less often were global understanding skills (30.9 percent) and English as a Second Language (16.6 percent).

Effect of Technology on Workforce Education and Training

The role of technology as a driver of workforce education and training needs is well documented in the professional literature and popular press. The U.S. Department of Education considers technology to be the primary force driving the transformation in today's workforce (U.S. Department of Education, 1992). In a recent

U.S. Department of Labor Statistics study (Frazis, Herz, & Horrigan, 1995) slightly more than one-half (53.4 percent) of over 8,000 employers reported that changes in technology or production methods or both were one reason for their company offering formal job skills training.

Figure 3 indicates that nearly all companies and organizations (97.5 percent) in the National Study viewed technological change as a factor in increasing their need for workforce development. Almost one-half of the employers (49.9 percent) indicated that technology affected training to "some extent"; almost one-third (32.0 percent) indicated the requirement for training was affected to a "considerable extent." Less than one-sixth of the employers (15.8 percent) thought technology drove the need for additional training to "a little extent," and only 2.4 percent believed technology had "no effect" on the need for training.

Goals for Workforce Education and Training

Employers were asked to indicate which goals for workforce education and training listed in the survey pertained to their employees' need for training. Employers were instructed to check all listed items that applied to their situation. As presented in Figure 4, two goals—"improve employee performance and productivity" (74.3 percent) and "upgrade employees' skills" (71.2 percent)—were considered relevant by almost three-fourths of companies and organizations in the study. Almost one-half (47.1 percent) of the employers contracted for workforce education and training programs with the goal of professional development or self-enrichment of their employees. Slightly less than one-fifth (19.8 percent) of the respondents sought workforce education and training because it was required by the profession of the employee; 8.8 percent of respondents sought workforce education and training because it was required by their suppliers or customers.

Need for Programs Offering Credit and Non-credit Classes

Employers were asked to indicate whether their workforce needed education and training programs that included credit, non-credit, or both credit and non-credit classes. As seen in Figure 5, respondents were most interested in programs that included both credit and non-credit classes: 57.1 percent of the employers checked this response item. More than one-third (38.1 percent) of the employers wanted only non-credit classes in workforce development programs, and 4.8 percent indicated they wanted programs that offered only credit classes.

More than nine in 10 (95.2 percent) of the respondents reported a need for either non-credit classes or both credit and non-credit classes. Slightly more than six in 10 (61.9 percent) of the employers reported a need for workforce development programs with either credit classes or both credit and non-credit classes. It is clear that both credit and non-credit classes are seen as important components of workforce education and training programs by the employers responding to the survey.

Distance Learning Workforce Development Programs

Distance learning methods of program delivery are becoming increasingly important components of workforce education and training programs. As expressed by one employer, "To

stay in a global community we must continue to learn, and the best way would be at home via distance learning."

Employers were asked to check any or all of five distance learning methods considered to be beneficial to their companies or organizations. As reported in Figure 6, more than eight in 10 (82.9 percent) of the employers checked one or more of the distance learning options. Almost three-fourths (72.2 percent) of the employers checked one or more of the telecommunications options (video-based, teleconference seminars, or television-based).

Video-based training received the largest single-item response with 56.8 percent of employers checking this item. The other distance learning programs were reported as a benefit by nearly one-third to one-fourth of the companies and organizations in the study: interactive videodisc training (31.2 percent); teleconference seminars (28.5 percent); and television-based learning (24.0 percent).

Familiarity with Various Workforce Development Programs and Services

Employers were asked to indicate the extent to which they were familiar with workforce development programs and services offered by American community colleges. Even though these employers all had direct experience with community college workforce development programs, more than seven in 10 respondents possessed only limited familiarity with the entire range of workforce programs conducted by community colleges. These results confirmed the findings of a series of workforce education and training forums held by the AACC and the U.S. Department of Labor (Falcone, 1994). In these proceedings, the participants agreed that many businesses are simply not aware of community college workforce education and training programs.

As shown in Figure 7, among the businesses and organizations surveyed, more than one-fourth of the employers (28.5 percent) reported they were "very familiar" with workforce development programs and services. Slightly less than six in 10 of the businesses and organizations (59.9 percent) were "somewhat familiar"; 11.7 percent of the employers were "not very familiar" with community colleges' programs and services. Employers suggested that the lack of greater familiarity with workforce programs may be the result of inadequate marketing and ongoing communication. One employer commented, "A stronger understanding of college resources needs to be promoted or marketed with a more professional approach." Another employer noted, "I think many resources are available to use that either we are not aware of or just don't think of this institution as a provider." One employer suggested that the college "make available to organizations a listing of all services that are presently available through the community college." This perspective was also shared by several deans and directors, who attributed limited employer familiarity with workforce education and training programs to inadequate marketing and promotion by community colleges.

Reasons for Choosing Community Colleges for Workforce Education and Training

From a list of possible responses, employers were asked to indicate why they chose community colleges to meet their workforce development needs. Respondents could check all items that applied to their company's workforce situation.

Cost effectiveness was the top reason given by businesses and organizations for choosing a community college for workforce education and training. More than two-thirds (68.3 percent) of the employers checked "cost-effective value for money invested" as a reason for selecting a community college. Typical employer comments concerning cost effectiveness included "best and greatest return for investment," "affordable training," and "very cost-effective." However, four in 10 of the written comments made by employers concerning cost were negative. One employer complained that "the cost is double, compared to other vendors." Another employer wrote that the cost was "always above what we expected to pay." Several employers reported that their company was "shopping around for a better buy." One employer said that "community colleges have gotten too high, so similar to consultants that we often haven't used them." Another employer reminded community colleges that they "need to be competitive in their pricing structures."

Cost was also recognized by the deans and directors as a factor impeding success in workforce development programs. Several deans and directors expressed concerns about the ability of community colleges to remain cost-competitive as suppliers of education and training services.

Almost all community colleges (98.4 percent) offer workforce development programs that customize their curricula, including on-site instructional delivery (Doucette, 1993). The businesses and organizations surveyed confirmed the importance of programs that "customized the training program for our needs" and offered "convenience" by providing programs "on-site." Customized training and convenience were the second and third most influential reasons for choosing a community college for workforce training. More than one-half (55.3 percent) of the employers indicated that customization was an influential reason for their choice; a similar proportion (52.0 percent) of businesses and organizations reported that convenience was influential.

Employer-written comments concerning the high degree of responsiveness and flexibility of community college workforce development programs were the second most frequently made comment, right behind positive comments on the quality of programs and the college as a whole. One employer's comment captures the thoughts of many others concerning responsiveness: "Customization is the key. Colleges need to work closely with business and industry to develop needed training. An instructor with a canned course is not received well by participants or management." Another employer said, "We appreciate the close proximity of our community college and their willingness to offer instruction on-site."

The importance of customization and responsiveness as a factor promoting success in workforce development programs was also widely recognized by deans and directors. Indeed, it was the success factor they most frequently cited. The ability to provide customized and convenient education and training services was seen by deans and directors as central to remaining competitive in a market that has experienced rapid growth in the number of private firms and consultants offering education and training services.

One-half of the employers (50.2 percent) indicated that the quality of instruction was a reason why they chose a community college to meet their workforce education and training needs. Employers noted that community college

workforce education and training instructors were qualified, knowledgeable, committed, and responsive professionals. According to employers, instructors were extremely interested in the success of their students and were skillful in motivating employees to learn, thus building strong student-teacher relationships. In particular, several employers reported that instructors were able to relate to the real world of work, and this practical orientation was a key to success. Positive comments made by employers about instructional quality were the third most frequently made comments.

However, employers made it clear in their comments that they expected the quality of instruction to be consistently excellent. Roughly one-fifth of the employers' comments about the quality of instruction expressed concern. Employers noted that some instructors were not fluent in their subject matter nor as technical as they needed to be. Employers expressed particular concern when an instructor was too theoretical and did not relate the content of the program to practical problems. One employer commented that "generally, instructors lack experience to handle questions or to apply skills." The importance of the quality of instruction was also shared by the deans and directors, who saw it as central to providing a satisfactory training experience and to remaining a credible supplier of education and training services to business.

Although not included as a survey item, one in 10 of all comments made by employers focused on the quality of the colleges' administrative staff in workforce education and training programs. Almost all (97.0 percent) of the employer comments concerning staff were complimentary. Employers considered the staff to be responsive, flexible, dependable, experienced, and knowledgeable professionals. They demonstrated a "can do" attitude, often going "beyond the call of duty." They were considered to be very efficient, well organized, and attentive to detail. Employers noted that the staff with whom they had worked were friendly, cooperative, and helpful. Since the employer/college interaction often occurs primarily with the administrative staff, this relationship is critical to the success of workforce education and training programs.

As reported in Figure 8, additional reasons for choosing a community college for workforce education and training included "contracted with community college in past with satisfactory results" (44.9 percent) and "referred to us by other business" (7.1 percent). The written comments of several employers described their relationship with the college as a long-term partnership. This past record of success kept them returning to the community college for additional workforce education and training. However, as indicated by the low response for the item "referred to us by other businesses," companies are not referring other businesses to community college workforce development programs to any great extent.

Ratings Regarding Aspects of Workforce Development Training Programs

Employers were asked to rate the quality of their experiences with community colleges in terms of seven factors associated with workforce education and training. Three of the factors were directed at the program level: "quality of training," "responsiveness to employer needs," and "cost of training." The four remaining factors concerned student outcomes of the education and training program: "technical skills," "communication skills," "computational skills,"

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Table 5. Ratings of Community Colleges by Aspects of Workforce Development Program

Aspect of Program	Poor (in %)	Fair (in %)	Good (in %)	Excellent (in %)	Don't Know (in no. of respondents)
Quality of training provided	0.5	3.5	50.5	45.5	73
Responsiveness to employer needs	1.0	7.6	43.8	47.6	59
Cost of training	0.6	12.1	53.0	34.3	63
Technical skills developed	0.4	9.7	68.7	21.2	284
Basic computational skills developed	0.6	12.8	71.3	15.3	624
Interpersonal skills of employees developed	0.8	13.2	68.9	17.1	534
Basic writing, speaking, communication skills developed	0.6	13.7	69.4	16.3	520

and "interpersonal skills." Employer ratings are shown in Table 5.

Program Level Ratings

Program factors associated with community college workforce development programs received high ratings from the companies and organizations surveyed. Eliminating the responses from respondents who checked "do not know," the percentage of employers who rated individual program factors as "good" or "excellent" ranged from 87.3 percent to 96 percent. The quality of the training provided was rated "good" or "excellent" by 96 percent of the businesses and organizations, with college responsiveness to employer needs rated as "good" or "excellent" by 91.4 percent of respondents, and the cost of training rated thusly by 87.3 percent of respondents. Ratings of "fair" ranged from 3.5 percent to 12.1 percent; one percent of employers or less gave ratings of "poor." All but a few companies and organizations felt they knew enough about the workforce programs to rate these items; few respondents left these items unmarked.

Comments by employers concerning the quality of the workforce education and training or the community college in general were the most frequently made comments, and the comments were overwhelmingly complimentary. Nine in 10 of the comments made about program quality were positive; 100 percent of the comments made about the community college overall were positive. For many employers, excellent workforce education and training experiences equate to a perception of excellence for the entire college. One employer sums up the feelings of many employers with the following written comment: "I have nothing but good to say about our local community college. I think they are doing an excellent job." Other typical comments include "pleased with the

quality of classes and the content," "doing an outstanding job of training and educating students," "excellent results," "timely and effective," "up-to-date," "seen real changes in the performance of my employees," and "enriched employee's life."

The responsive nature of workforce development programs was the second most frequently addressed issue in the written comments made by the employers. Ninety-two percent of the comments made concerning responsiveness were positive, and employer comments touched on every aspect of workforce education and training programs and services. Employers noted aspects such as the flexibility of the instructors and staff; the quick turnaround time for program design and implementation; the training programs' focus on the real world; the college's focus on community needs; and the colleges' willingness to offer programs when, where, and how the company or organization needed it. One employer wrote, "Flexibility is the main reason we have come to rely on the community college for much of our training needs. The community college has been able to respond to training requirements with courses that hit the mark every time. The community college is our lifeline to higher education."

Two examples that represent typical comments follow.

1. We have worked with the community college on a technical training program, which has been tailored to meet our changing needs. The college should be commended for their cooperation, flexibility, and eagerness to comply with our demands. It has been a rewarding experience for the students and the company.
2. Easy adaptation to specific needs and requirements. . . . Great flexibility to meet our needs. . . . Personal touch for employees. . . . Community college motto could easily be, we are part of the community and we care.

The comments of deans and directors reflected a similar appreciation of the importance of responsiveness and flexibility, particularly being able to offer what the employer wants, and where and when the employer wants it.

In direct contrast to the comments made on responsiveness, employers also commented on the problems they experienced with community college bureaucracy, the primary factor working against responsiveness. Although these comments represented a small number of the total number of comments, the intensity of these comments suggests that severe problems here may lead to the loss of customers in the future. One employer reported frustration when his company was "required to play by rules that just didn't work and were too rigid." Several employers said that it was "hard to find the right person to get the information they needed" and that "seldom are calls returned." Other employers reported frustration with administrative processes such as billing and registration; they also reported that class cancellation procedures were a nightmare. Several employers noted that "the staff seems to be too busy to interact with problems." One employer said that "the college still operates as an educational institution. What will be required to become a primary training vendor for me is to think like a business person and respond as

such." Another employer commented, "I've decided it's easier to go to other training providers than try to make our needs fit into a rigid system of rules, schedules, and cost."

The potential of bureaucracy for impeding successful workforce development programs was also clearly understood by the deans and directors. They mentioned bureaucratic structures and processes as a barrier to success more frequently than any other factor. Bureaucracy was widely perceived by the deans and directors as a serious constraint on the ability of community colleges to be responsive and flexible in offering education and training services.

Student Level Ratings

The percentage of employers who rated the various student outcomes of education and training provided by community colleges as "good" or "excellent" ranged from 89.9 percent to 85.7 percent as follows: technical skills (89.9 percent); computational skills (86.6 percent); interpersonal skills (86 percent); and communication skills (85.7 percent). Ratings of "fair" ranged from 9.7 percent to 13.7 percent; less than 1 percent of employers checked "poor." Across these items, 284 to 624 of the employers indicated they did not know enough about the individual student outcome to offer an informed opinion. (Program rating factors are germane to all education and training programs, but not all student outcome factors are relevant to every program.)

Several employers commented that improved assessment of student outcomes was needed. One employer noted, "I believe the training was worthwhile, but I have no way to measure the actual improvement or benefit." Another employer said, "More after-training evaluation is needed between the employer and the community college. Training participants in skill-based courses should be required to demonstrate the skills taught to a designated proficiency level in order to be considered as having satisfactorily completed the skill-based course." One employer suggested that instructor assessment could lead to meaningful, practical follow-up at the company. "Perhaps instructors could meet privately with managers/supervisors of a group (at some point right after the training session) to discuss how the manager might help facilitate the practicing of the skills or material covered in the training."

Assessment and evaluation systems were perceived by the deans and directors as an important success factor. Except for (1) customization and responsiveness and (2) leadership support, they mentioned it more frequently than any other factor contributing to program success. Such systems were seen as instrumental in the effective customization of education and training.

The lack of objective assessment procedures for student outcomes of workforce education and training programs was also noted in a recent national survey of employers (Frazis et al., 1995). This study found that subjective measures were most frequently used for measuring the success of formal job skills training. Slightly more than one-half of the employers in this study used informal supervisory evaluation of the overall worker performance after training. Less than one-half of the study's employers used the workers' own opinions of training, and only one-third used specific objective measures, such as fewer mistakes or increased output, as methods of judging success. The study also reported that small businesses are much less likely to conduct any type of evaluation than are larger firms.

Ratings by Familiarity

Positive ratings of both program and student outcomes factors by the businesses and organizations surveyed were higher for those respondents who reported greater familiarity with community college programs and services than for those employers with less familiarity. Across the seven ratings factors as shown in Figure 10, the proportion of respondents who gave community colleges a "good" or "excellent" rating were as follows: "not very familiar" (82 to 91.6 percent); "somewhat familiar" (84.2 to 95.4 percent); "very familiar" (88.1 to 95.9 percent). The difference in ratings across the three categories of familiarity was more pronounced for the three program dimensions—quality, responsiveness, and cost—and for the technical outcomes skills of students than it was for the other student outcomes.

Employers Who Would Recommend Community Colleges

The "bottom-line" rating item of the study asked employers whether they would recommend community college workforce education and training programs and services to other businesses. These results are reported in Figure 11.

Ninety-five percent of businesses and organizations surveyed reported they would recommend community college workforce education and training programs to others. Only 4 percent of the respondents were not sure about giving a recommendation. Only 20 respondents (0.9 percent) would not recommend a community college.

One employer summed up both the "bottom-line" item and the quantitative survey results in his comment: "I recommend using the college for job training and for helping with job expansion and training. The college has many good ideas for our uses." Another employer wrote, "We would not be where we are today . . . facing the many challenges of competing in the global marketplace . . . if it had not been for the quality instruction provided our employees through the college. Not only have our employees benefited, but the community at large has benefited."

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Figure 1
Extent of Current Workforce Need for Education and Training

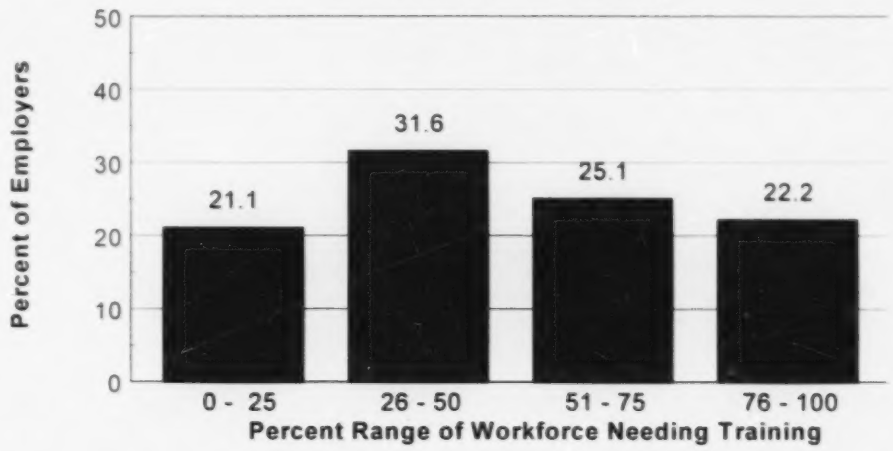


Figure 2
Employer Estimate of Education and Training Needs in Specific Skills Areas

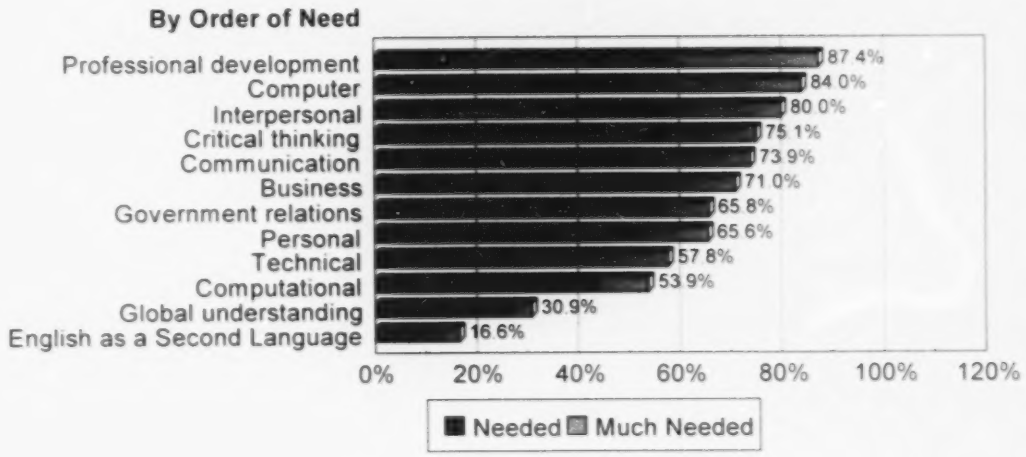


Figure 3
Extent Technology Change Increases Need for Training

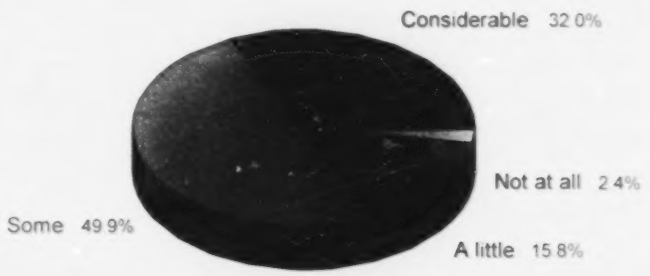


Figure 4
Percent of Employers Indicating
Various Goals for Workforce Training

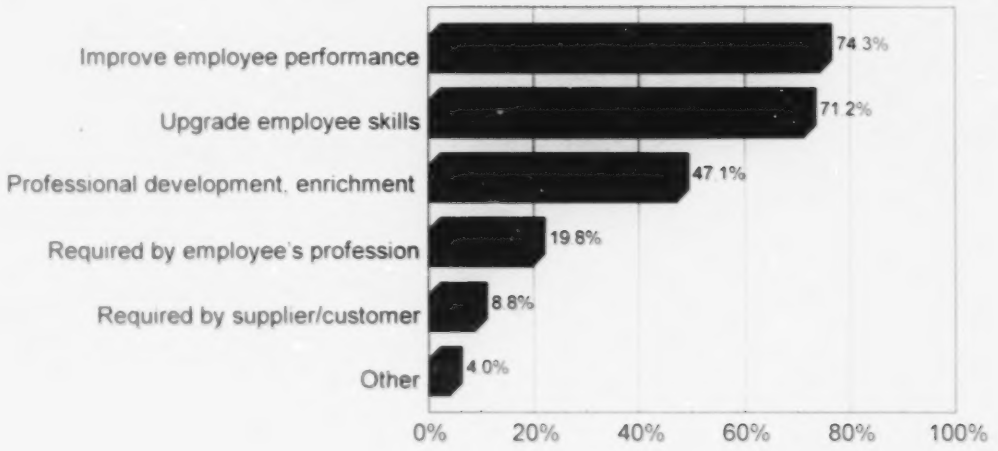


Figure 5
Type of Classes Needed

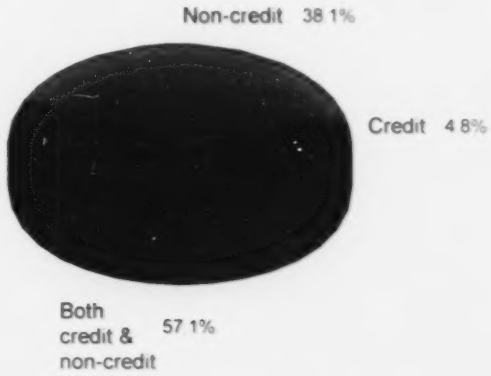
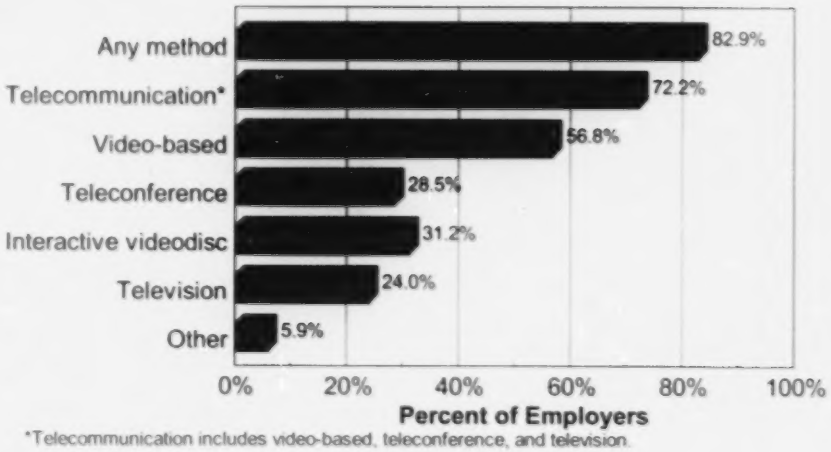


Figure 6
Extent Distance Learning Seen as a Benefit



*Telecommunication includes video-based, teleconference, and television.

Figure 7
Familiarity of Employers with Various Workforce Education and Training Programs

Figure 8
Reasons for Choosing Community Colleges for Workforce Education Training

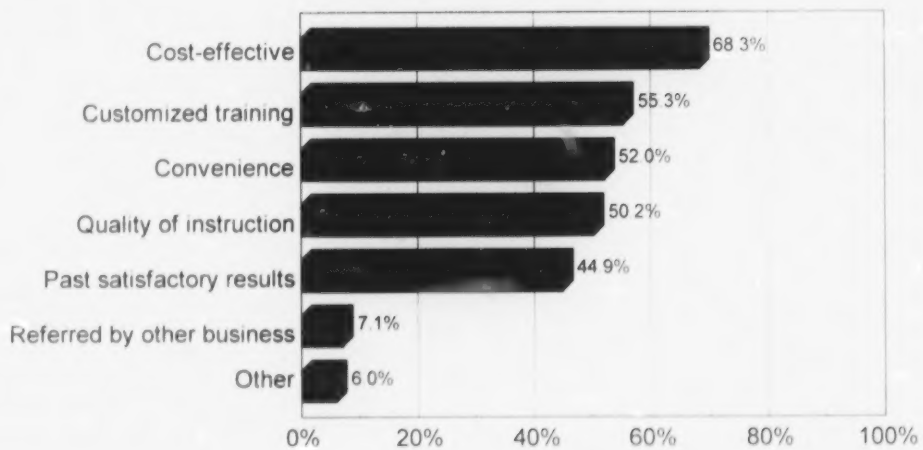


Figure 9
Employer Ratings of Good or Excellent
Concerning Aspects of Workforce Programs

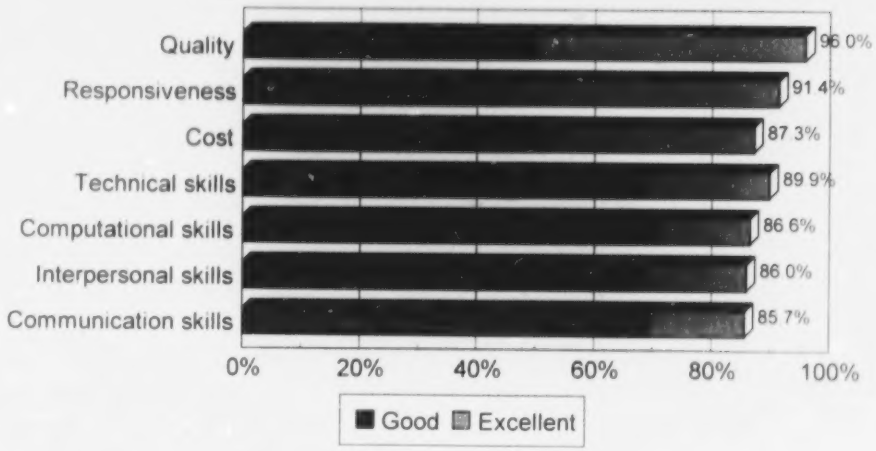


Figure 10
Employer Ratings of Program Aspects
By Degree of Familiarity

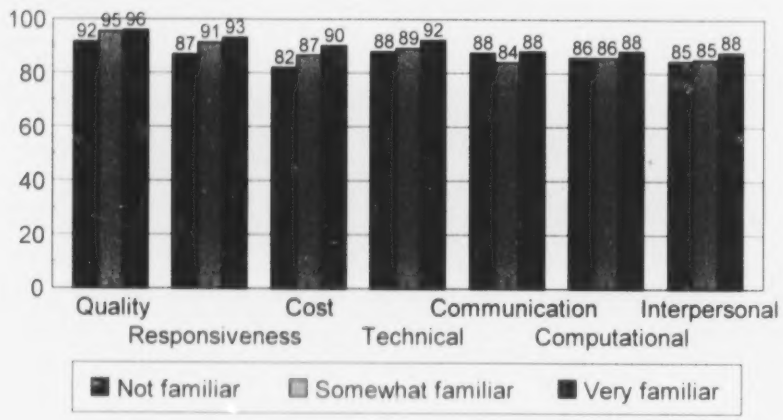


Figure 11
Employers Who Would Recommend
Community Colleges for
Workforce Education and Training

CHAPTER 6

Survey of Deans and Directors

Community economic development through workforce education and training has been the core mission of most comprehensive community colleges since their founding. So central is it to the community college mission that 96 percent of the nation's community colleges provide workforce training for employees of business, industry, labor, and government (Doucette, 1993). The volume of such activity at community colleges continues to increase, clearly reflecting the great interest among corporate and non-profit clients who look to community colleges to meet their unique workforce development needs (Community College Roundtable, 1994). Some research indicates that as much as 75 percent or more of the existing workforce will require significant job retraining in the next decade, a sign that the interest in and demand for workforce education and training services is not likely to decline (Dilcher, 1993).

Driven by global competition, technological change, and the changing demographics of the American workforce, among other conditions, these corporate and non-profit clients of community colleges are compelled to help their existing employees either develop their current skills to higher levels of productivity or to develop entirely different skills. Their new employees, whether they are entering the workforce for the first time or transitioning industries as the result of layoffs, downsizing, or rightsizing, are expected to be lifelong learners. They are expected to possess critical-thinking and problem-solving skills and to be ever ready to retrain as competition stiffens or technologies change. Community colleges are increasingly the resource to which corporate and non-profit clients turn when new skills must be learned—and quickly.

Such was the case when Auto Air Composites, Inc., in Lansing, MI, recognized the need to convert their formal quality system

into the ISO 9000 format. The company and Lansing Community College successfully partnered to provide the necessary workforce education and training. Such was the case when Glen Oaks Community College (MI) worked with a company "to improve customer satisfaction, cost savings, and employee morale." Similarly, to regain profitability by using improved manufacturing methods and total quality management principles, Glacier Vandervell in Atlantic, IA, partnered with Iowa Western Community College, not only achieving profitability, but also winning a prestigious award for excellence in manufacturing. When looking for workforce development providers, therefore, clients look for successful programs, a track record that may mean their own success or failure in the corporate or non-profit environment.

Through the design of the National Workforce Development Study, two perspectives were obtained on the role of community colleges in providing workforce education and training: that of the employer, as the community college client, and that of the deans or directors of continuing education, as the education and training service providers. Employer perspectives on current and future training needs and community college service—and success—in meeting those needs were captured in their responses to the study's survey. These perspectives have been described in Chapter 5, Survey of Employers. For deans and directors, the perspective sought in this study concerned the creation of success in workforce development programs: what factors contribute to or work against it and what practices exemplify it. These factors are discussed in this chapter. The implications for instruction are chronicled in Chapter 4, Rethinking the Role of Instruction for Workforce Training. A discussion of the survey results of both employers and deans/directors are found in Chapter 7, Discussion of Survey Results.

Deans and directors, those charged with the leadership of workforce development programs, were asked to write two, one-page summaries. One summary was to provide an analysis of the factors that provide support to or rise to challenge the success of workforce education and training programs. The other summary was to describe one of their college's exemplary workforce development practices. Fifty-six deans and directors of the 104 participating colleges (53.8 percent) chose to submit summaries. One summary was received after the analysis was completed and, therefore, is not included in the results. The voices of those individuals—who work within community colleges to create successful programs—can be heard through the quotations taken from their one-page summaries, which are used throughout this chapter.

Framework for Analysis of Summaries

To provide an indication of the importance placed on various factors by the deans and directors of workforce development programs, a list of factors was developed and the frequency of their mention counted. By frequency of mention, 87 percent of the deans/directors considered the most important factor to the success of workforce education and training programs to be customization and responsiveness. Deans/directors considered the factor that most challenged program success to be the bureaucracy that exists in traditional educational structures, practices, and systems. Table 1 provides a list of all the factors mentioned by

Table 1. Successful Workforce Development Programs: Factors of Success and Challenge

FACTORS OF SUCCESS	FACTORS OF CHALLENGE
Customization and Responsiveness: programs, instructors	**Traditional Bureaucratic Structures, Practices, and Processes:** college structures, both credit and non-credit; college practices and processes; instructional practices and procedures
Leadership Support and Commitment to Role in Mission: place of workforce development in college mission, support of senior leadership and governing board, support of company CEO, support of county and state agencies	**Inadequate Funding: training support,** equipment and facilities, faculty and staff
Assessment/Evaluation systems: employer needs, employee skill levels, pre-planning for training, comprehensive needs assessment, environmental scanning	**Lack of Employer Recognition of Need:** strategic planning, limited time, unnecessary expense, lack of commitment, and incentives
Quality of Instructional Staff and Instruction: faculty characteristics, faculty as learners, special skills of faculty	**Marketing:** limited funding, limited staff, market penetration
Partnerships: learning, long-term relationships	**Cost:** competitive pricing, cost containment, alternative marketing strategy
Communication and Marketing: communication characteristics, marketing characteristics, marketing approaches, strategic marketing plan	
Image: program credibility, integrity	
Single Point of Contact: customer service, location, center concept	
Program Staff	

the deans and directors, starting with the factor most mentioned and ending with the factor least mentioned.

Factors Contributing to Success

Customization and Responsiveness

Community colleges are tied closely to the changing needs and economic fortunes of their local communities. If community college workforce development programs are to be successful, they must be "committed to flexibility, responsiveness and the delivery of innovative, customized programs and services." Most colleges use three main types of customization, according to Sherrie Kantor, the author of Chapter 4:

1. off-the-shelf courses from the college or a vendor that are taken to a business or industry site
2. modified courses, where an existing course is modified for a particular client. Frequently company examples or materials are inserted into the instruction, and the course focuses on "need to know," rather than "nice to know."
3. total customization, where the course and delivery is designed from scratch for the client, often following a thorough assessment

Flexibility, responsiveness, and innovation were demonstrated by Northeast Texas Community College (Mt. Pleasant, TX) toward a local and national "demand occupation," reported in the college's submission of their Truck Driving Program. This off-the-shelf model is an exemplary practice, receptive to special populations, including women, minorities, dislocated workers, and retirees. "Graduates of the program can average $25,000 plus bonuses in their first year with a major national carrier . . . As of Fall 1995, over 1,000 students have graduated . . . and more than 90 percent have been placed in industry-related jobs." A similar responsiveness is mentioned by San Jacinto College - Central Campus (Houston, TX) in its exemplary practice narrative on the chemical process technician program. Graduates are placed "in jobs with many beginning positions paying $22,000 to $40,000 per year." Recognizing the gender shift in workforce demographics, Dundalk Community College (Baltimore, MD) responded by developing an award-winning NEW Work for Women Program. The program, which was the focus of their exemplary practice submission, prepares women for work in nontraditional careers.

With a notable increase in competition from private firms and consultants for workforce education and training clients, customization and responsiveness are often the community college's competitive edge. The Intensive Computer Workshops, offered through the Center for Business and Technology and submitted by Springfield Technical Community College (MA) as their exemplary practice, were submitted in part for their achievement of a competitive edge through customization and responsiveness. The college's selection of workshops reflects the most widely used software packages in business and manufacturing for their region. Regional responsiveness has been a hallmark of Garrett Community College,

located in a rural, mountainous part of Maryland. As explained in their exemplary practice, "Delays will cause a company to look elsewhere to meet its training needs." A dean/director commented on creating this edge of customization and responsiveness: "We have been successful at becoming the provider of choice, in large part, because of quick, flexible response to the client's needs. During marketing calls we use the phrase, 'what you want, where you want it, and when you want it' to make sure they understand our commitment to providing what they need."

One of the admonishments of Peters and Waterman in their 1982 best seller *In Search of Excellence: Lessons from America's Best-Run Companies* was "Stay close to the customer." (p. 156). Over a decade later, this basic principle remains a key to success and community college responsiveness. The principle, when followed, leads to a greater awareness of company readiness, a key ingredient to learning. According to a workforce education and training dean/director: "Timing is important. If the college is there and can produce training when the company is ready, opportunities to succeed will be greater. This means that the college needs to stay in close contact with the business to know when and to be ready when the time is right."

Success in customization and responsiveness for instructors in workforce development programs often means "that customized training does not often fit the academic curriculum of credit programs." Often it requires modification of programs or courses by breaking down whole programs into skill modules. Doing so creates efficiency for employers because instruction can be delivered in shorter time frames, and, therefore, employees' time away from tasks is reduced. Programs can be modified or fully customized to provide employees with only what they need, given the type and size of their industry. For example, according to their exemplary practice submitted for this study, the Regional Manufacturing Technology Center at Kellogg Community College in Battle Creek, MI, offers such "individualized instruction" for employers and employees. The Center has "broken down its traditional industrial trades training classes into approximately 800 constituent skills . . . . requiring from two to five hours to master." As a result, "companies and students can tailor their course work to very specific workplace needs." College credit, which may be applied toward a certificate or associate degree, is offered for all classes.

Success in customization and responsiveness also means meeting the demands of employers who "want their employees to be able to 'learn it today, use it tomorrow,'" said one dean/director. They want "effective training, yet not necessarily training that is only offered in traditional formats." As this dean/director continued, "The college has had difficulty when restricting certain types of training to a credit format." While the integrity of a program or the training provided must never be compromised, it is essential for success that the customer's position be understood and their training needs met. As one of the deans in the study, she said:

> *Part of our responsiveness is the willingness to offer courses that contain exactly what the client needs. While we use "off the shelf" examples of possible courses, we help our clients think about what the training is intended to accomplish, what it should cover, who should attend, and when they should attend. When it comes to course*

content we then modify if desired. The only rule we have is to meet the client's needs.

More and more colleges are performing assessments of many aspects of the workforce development business—their employee skills, technology, and physical layout as well as communication patterns and management skill—before embarking on training. All of this customization of content and delivery may require training in these skills for faculty.

Customizing to meet client needs requires that instructors "keep current in their fields." They must be capable of being "practitioners" who avoid placing "too much emphasis on theory." Indeed, instructors must be learners themselves and often "go to school" with the client company to learn its business and learn the nature of the work and the people who do the work. Customization and responsiveness for an instructor may also mean adapting to changing schedules to meet the demands of a company's production cycle. Instructional success in the area of customization and responsiveness, then, relies heavily on "the willingness of instructors to be flexible." and the "cooperation of all departments in the college" is essential.

For colleges seeking success in their workforce development programs, the term *responsiveness* must take on new meaning, as one dean/director explains:

> *Industry and education can have drastically different expectations regarding what is reasonable in terms of time to initiate, implement, and complete a training effort. Industry often expects an almost immediate response to their needs in terms of making decisions, assigning staff, mobilizing, and delivering instruction. Traditional educational institutions are more comfortable with a deliberate process involving discussion, consensus building, and finally decision-making. For educators to be successful in this arena they will have to adapt to industry expectations of response.*

Adapting to those expectations necessitates change throughout the college. The importance of the workforce development market to the future of community colleges requires flexibility on the part of everyone involved in providing programs and services to it. As one dean/director wrote:

> *Successful customized training depends on the ability to acquire human and physical resources quickly and efficiently. This includes recruiting and hiring staff and purchasing material and equipment. For educators to be successful in this arena, systems will need to be in place which adequately balance the need for rapid response and flexibility with the accountability required of a public institution.*

A critical element to success in customization and responsiveness is, therefore, the development by the campus community of an understanding of "the value of customer service" for internal as well as external clients.

Leadership Support and Commitment

Mentioned almost as often as customization and responsiveness was the factor of leadership support and commitment to workforce development as an important part of the community college mission (81 percent). Forty-five of the deans and directors mentioned a commitment

to "workforce education and training as a critical piece of the mission" and the support of one or more of the following individuals or groups as essential to the success of the workforce education and training program at the college: the president; senior leadership/management; the governing board; in business, the chief executive; in government, county and state agencies. In the exemplary practice of Garden City Community College (Garden City, KS), the essential leadership support came from a business support other than a CEO. It came from the award-winning advisory committee for the college's Criminal Justice/Police Science Program. In addition to the normal advisory committee duty of keeping the curriculum current and responsive, this award-winning committee assists "with the student organization, crime scene instruction, firearms, and . . . whatever the program needs to enjoy continued success."

One dean/director, explaining this factor of success wrote, "Leadership at all levels of the college must value the partnerships formed by workforce development programs, articulate the role of workforce development in the college mission." As another dean/director noted, it must be "fully understood that our mission includes supporting the workforce training needs of area employers and that meeting these needs more often than not requires customized training provided on a very flexible schedule and quite frequently with a very short lead time." The importance of recognition by the college community—external as well as internal—of the integral relationship of leadership, workforce training, and mission prompted one dean/director to write:

> *Business people network in order to generate business. CEOs join country clubs and philanthropic organizations. They know each other and are comfortable utilizing each other's services. The president and senior administrators, especially corporate and continuing education officers, of community colleges should enter this milieu and become seen/known as senior executives of a service industry.*

For success, deans/directors view support from the college president as "crucial." According to one, program success is greatly enhanced by "the strong commitment that the college's upper management has in servicing our community." The combination of leadership support and valuing the college's mission changes institutional dynamics: "There are very solid linkages between manufacturing and the College's board of trustees, president, and vice presidents. Therefore, much internal support can be readily given to the delivery of company specific training." At another college, the support of the president, executive vice president, and dean of adult and community education "is most evident when it becomes necessary to do something differently from 'the way we've always done it at the college.'" A similar reaction is noted by another dean/director: With college presidential support, the "traditional areas have responded with increasing cooperation and support."

Deans/directors also found the support of the CEOs of the companies working with the college to be critical to the success of a workforce education and training program. As one dean/director put it, "Without direction, commitment, and consistent support from the company's management, the enterprise's effect is questionable. What makes a partnership work is the owner's drive that the training

programs will be available and will be seen as important and as a benefit of all." Most successful programs serve employers who believe in "building people first," then their productivity.

Finally, the support of county and state agencies charged with economic development is viewed by deans and directors as a factor that contributes to the success of workforce development programs. Des Moines Area Community College relates in its exemplary practice summary the state support it has received through the Iowa New Jobs Training Program since 1983, enabling the establishment of their successful Economic Training Group. In 1990, the state added two more state-funded training programs, Small Business New Jobs and Retraining. Together, the programs have provided $37.4 million in training to more than 160 college programs.

When county and state agencies, charged with serving the needs of the business community, think workforce development, they should also think community colleges. They should "recognize community colleges as the primary training delivery provider for their communities and be willing to commit funding to support a skilled workforce for their communities." As another dean/director said, "Whenever a business contact is made or a visit is planned, the community college should be included." Promoting the community college in this way may be accomplished by the president or a college representative or by the agency representative being well informed about the community college's capacity to serve and having the appropriate material to distribute. As a dean/director continued to enumerate, it could also be accomplished "by the agency representative talking about community college customized training capabilities and referring the business to a specific college contact."

Assessment/Evaluation Systems

Thirty-five of the 55 deans/directors (64 percent) mentioned assessment/evaluation systems in their comments about factors that contribute to the success of workforce education and training programs. Included in this factor were assessments of employer needs and employee skill level, program outcomes, and environmental scanning.

To many deans/directors, assessment as a factor of success is directly related to the effective customization of training and delivery that results when comprehensive needs assessments are conducted. According to Kantor (1994), as companies, large and small, retool to meet the changes in their industries, "Training must be embedded in the general process of firm modernization. This means that community colleges need to engage in assessment of firms, aid in achieving technical knowledge on process and product. . . ." (p. 23) According to Bernier, Jackson, and Moore (1994), comprehensive workplace assessment is a necessary condition for identifying core problems and for proposing lasting solutions. A program dean/director pointed to assessment/evaluation as a factor of workforce development program success:

> *. . . assessment cannot be emphasized enough. The closer the company is to identifying the root of its problem, the more relevant and effective the training will be. If training is the right solution to the problem, it will target the right employee population, address the problems or issues, and will yield positive and measurable results.*

The training assessment option, in which the college assesses the skill levels of employees and determines training needs of employers prior to customizing a program, was characterized by one dean/director as being "particularly attractive" to business and industry. Indian Hills Community College (Ottumwa, IA) relates in its exemplary practice summary the importance of assessing employee skill levels, for example, in the assessment process. In their pilot project with three companies, "over 35% of employees tested at or below the high school entry level in both math and reading."

Deans and directors saw pre-planning of workforce training efforts as a particular strength in their programs. One dean/director commented, "In order to facilitate a workplace skill building program, the college needs to be alert and aware of industry's production needs, understand the internal culture of the industry, and be willing to administer the program as industry wants and needs. In short, the college staff needs to become part of the industry." Another approach to pre-planning is suggested by Hamm and Mundhenk in the monograph *American Workforce Development* (1995). They proposed that for the most successful planning and assessment, rather than rely on state or national market data sets, colleges "should routinely monitor local labor markets" (p. 6). The relationship of pre-planning, based on this advice, and success is addressed by the comments of another dean/director: "It is a constant challenge to determine current training needs and provide appropriate training. The rewards come with improved productivity and profitability for the businesses in our area."

Having the capability to conduct comprehensive needs assessments—having "ownership of the assessment tools for immediate use and response" and a "track record"—creates opportunity for workforce development as well as success. One dean/director wrote of conducting "several comprehensive needs assessments associated with base closures, company relocations, international needs assessments for the private sector in Mexico, and other research projects in partnership with business, industry and state level departments, like the Department of Commerce." And another said, "We scan the environment vigilantly because, when resources are scant, it takes longer to put together a sound training program. Knowing company relocation plans well ahead of time can make the difference between being prepared to train new employees and losing out altogether."

Another dean/director wrote of the important contribution of comprehensive assessment to success, especially when meeting the increasing need for business and industry today to know "the impact of the training on their company's bottom line" or "business objectives." Seldom are those who need to know—senior management—willing to spend the time in identifying key success factors and other business goals that can be achieved through employee training. Workforce education and training programs able to provide this assessment to employers see it as a contribution to the success of their programs.

Quality of Instructional Staff and Instruction

The quality of the instructional staff and the instruction and training provided to clients was mentioned directly by 27 of the deans/directors (49 percent). It was indirectly identified by all of the deans and directors as key factors in the success of workforce training

programs. It was the belief of many deans/directors that the success of their instruction/training programs was the result of "repeat customers who had a great training experience." This belief was certainly validated by employers who responded to the National Workforce Development Study. Ninety-six percent of the employers saw instructional quality as critical, rating current instructional quality as "good" or "excellent," given their instructional/training experience with community colleges.

Deans/directors recognize that when a company does not see or recognize credible expertise in the instructional staff, the company will not regard the college as a supplier of training services. Except in rare instances, the faculty who teach in workforce development programs do so on a part-time basis. The instructional staff usually includes a few members of the regular credit faculty, a few full-time trainers in the non-credit area, and numerous adjunct faculty, many recruited directly from business and industry. Deans/directors are keenly aware that recognition as a provider may rest on the quality of the instructional staff. When talking about instructors/trainers as a success factor for their programs, they most often mentioned faculty who are "practitioners not academicians"; "who have experience teaching inside companies"; "who have recently been in the industry"—sometimes through a program provided by the college—and "who have extensive business/industry experience." For many deans/directors, finding such individuals was critical to the success of their programs. As one dean/director wrote: "The successful customized training administrator will be the one who establishes the network required to identify and secure this pool of talent."

For many deans/directors, instructional quality as a factor contributing to program success was equated with their college's ability to customize programs and respond rapidly to employer needs. An integral key to that customization and responsiveness is the instructional staff. A number of deans/directors commented on the willingness of faculty to learn as a key factor, "investing time in discussing and discovering the workers' temperaments, learning styles, and performance expectations" or "learning about the company culture" to better design and customize specific program efforts. The importance of learning the company culture is reported in the exemplary practice of the San Diego Community College District's Employee Training Institute. Teal Electronics, a customer of the Institute, summarized the company's experience: "Of all the companies we have worked with . . . . they have done the best job of anyone in taking the 'Teal Way' of doing business and building it totally into the class." Several deans/directors commented about the "flexibility" and "creativity" of instructors as contributing additionally to the success of their programs; as "being open to changing the curriculum when necessary to address an immediate need in the workplace."

Many deans/directors pointed to the special skills required of workforce development instructors, skills that often contribute the aspect of quality to their instruction. One dean/director spoke of the willingness of instructors/trainers "to use innovative teaching strategies"; another spoke of instructors/trainers who "ignited excitement about learning." Often recognized as a special skill was the possession of a unique sensitivity to and understanding of the adult learner in general as well as in some specific instances. "Often adults in retraining programs

are not just reaching out for new career opportunities but may be dealing with loss of self-esteem due to job loss and may have a genuine fear of being 'too old to learn.' Rebuilding confidence is an integral part of workforce training."

Partnerships

Seventy-five percent or 41 of the responding deans/directors reported a partnership as the college's exemplary practice in workforce education and training. The centrality of partnerships in the exemplary practices reported by deans/directors is a reflection of the increased recognition of the value of partnerships for creating the well-educated, well-trained, highly-skilled, and competitive workforce needed in the new global economy (Reich, 1993). Other research has identified partnerships as a good instrument, often the best, for being responsive to employer needs (Bender & Carter, 1994).

When mentioning partnerships as keys to success, deans and directors noted that workforce education and training partnerships take place on many levels. Examples include jointly evaluating specific training needs and screening and pre-testing employees; sharing facilities, equipment, and faculty; locating support services at common locations; and forming consortia of smaller businesses that need the same training. Learning was mentioned by one dean/director as a characteristic of successful partnerships: ". . . success depends upon mutual identification of learning and productivity needs for all stakeholders: the college, the company, and the learners." Partnerships, according to deans/directors, lead to innovation, increased effectiveness, and improved efficiency. One dean/director noted,

> *The logistics of putting together an adequate number of individuals to deliver training in a cost-effective manner are sometimes our biggest challenge. This, however, has caused us to find creative ways to meet training needs. Training consortia, joint training sessions among geographically close businesses, and mobile computer and electronic laboratories have helped us provide the service the companies needed.*

The establishment of the long-term education and training relationships that often result from partnerships was another factor frequently mentioned by deans/directors as a contributing factor to success. According to Bender and Carter (1994),

> *. . . community colleges should view their role with companies as long-term and market-driven. Recruiting a company is only the first step in the process of developing a training partnership with the employer. The goal should be to establish a long-term relationship that results in bottom-line cost and time saving to the employer (pp. 50–51).*

The long-term relationship mentioned by deans/directors was frequently established through initial comprehensive assessment and training plan development or by a "good first experience" with the community college in the delivery of workforce education and training. For some business or government partners, it is "the college's ability to deliver a consistent, quality product at an extremely competitive price . . . that is the key to the partnership." For others, it is the ability of the college to "walk the talk," which seems especially true,

according to deans/directors, for colleges providing workforce education and training around the development and improvement of quality. (Finger Lakes Community College in Canandaigua, NY, a leader in providing Total Quality Training in a four-county area, submitted as its exemplary practice the college's recent conversion to quality improvement and a customer-service orientation.)

From the perspective of the provider, one dean/director remarked that "the assurance of a partnership is knowing that whatever the challenge you're not alone. The excitement of a partnership is knowing that you're never out of potential or promises for a better future for all involved."

Partnerships as exemplary practices were reported by the following community colleges:

- Anne Arundel Community College (Arnold, MD) and the Maryland Motor Vehicle Administration
- Baltimore City Community College (MD) and Atlas Container Corporation
- Black Hawk College (Moline, IL) and the local chapter of the American Production and Inventory Control Society
- Blue Mountain, Chemeketa, Columbia Gorge, Portland Community Colleges (OR); Oregon Economic Training Department; and 11 food processing companies in the Willamette Valley and Columbia River areas
- Blue Ridge Community College (Weyers Cove, VA) and Dupont Waynesboro
- Butler County Community College (El Dorado, KS) and Pratt & Lambert United, Inc.
- Central Piedmont Community College (Charlotte, NC) and Okuma America
- Chesapeake College (Wye Mills, MD) and the Upper Shore Private Industry Council
- Community College of Allegheny County-Boyce Campus (PA); the Allegheny County Board of County Commissioners; and the U.S. Postal Service
- Community College of Rhode Island and Hasbro, Inc.
- Essex Community College (MD) and Genesis ElderCare Network
- Forsyth Technical Community College (Winston-Salem, NC) and Westinghouse
- Frederick Community College (MD) and the Job Training Agency
- Harford Community College and JM Huber Corporation, Chemicals Division (Havre de Grace, MD)
- Hawkeye Community College (Waterloo, IA) and DPI, Waterloo Facility
- Houston Community College System and the Metropolitan Transit Authority
- Howard Community College (Columbia, MD) and the Maryland Energy Institute
- Iowa Lakes Community College (Estherville, IA) and Fenwick Golf of Berkley, Inc.
- Iowa Valley Community College District and the Marshalltown Medical and Surgical Center
- Iowa Western Community College and Glacier Vandervell
- Joliet Junior College (IL) and the Three Rivers Safety Council
- Kirkwood Community College (Cedar Rapids, IA) and Cedar River Paper Company

- Kishwaukee College (Malta, IL) and Barber-Greene, a Division of Caterpillar Paving Products, Inc.
- Lake Michigan College (Benton Harbor, MI) and Whirlpool Corporation
- Lakeland Community College (FL); Manatee Community College Open Campus (Bradenton, FL) and the Florida Department of Transportation
- Mitchell Community College (Statesville, NC) and ASMO North Carolina; Burlington Industries, Inc.; Clark-Hurth Components; JC Penny Distribution Center; and Thorlo, Inc.
- Montgomery College (Rockville, MD) and the National Institutes of Health
- Northeast Iowa Community College (Calmar and Peosta, IA) and John Deere
- Northern Virginia Community College-Alexandria (VA) and the Potomac Academy of Hair Design (non-credit) and U.S. Patent & Trademark Office (credit)
- Prince George's Community College (MD) and the Pepsi-Cola Bottling Company of Cheverly, MD
- Rockingham Community College (Wentworth, NC) and Burlington Industries Reidsville Weaving Plant
- St. Louis Community College (MO) and McDonnell Douglas Corporation
- San Antonio College (TX) and the City of San Antonio
- Santa Fe Community College (NM) and the New Mexico Highway Department
- Southwestern Community College (Creston, IA) and Mederer Corporation
- Tri-County Technical College (Pendleton, SC) and member companies of the World Class Training Center
- Triton Community College (River Grove, IL); Ford Motor Company; and the United Auto Workers
- Western Iowa Tech Community College and Midwest Industries, Inc.
- Wor-Wic Community College (Salisbury, MD) and Dresser/Wayne

Common Ground: Exemplary Community College and Corporate Partnerships, a 1996 publication of the League for Innovation in the Community College contains the exemplary practices in workforce training and education of 14 of the nation's community colleges. The publication describes successful partnerships developed across the county, specifically between community colleges and manufacturers. Overlap between the exemplary practices contributed by National Workforce Development Study respondents and those reported in *Common Ground* is minimal, pointing to the importance of partnerships to the workforce development movement and the contribution of partnerships to success.

Communication and Marketing

Deans and directors of workforce development programs often mentioned effective communication with and promotion and marketing of programs to employers as a factor of success. Communication and marketing were mentioned as often as partnerships by the deans and directors.

"Open, frequent, consistent" and "clear communication" with employers, according to

the deans/directors, accomplished a number of objectives geared to program success. First, communication builds new business. As one dean/director reminded: ". . . keep in touch with major employers, even though they may not need your services at the time. Business conditions change rapidly; always be ready to respond when the need arises." A second contributor of success was pointed out by another dean/director: "Our goal is to develop on-going relationships with our clients. We encourage our clients to help us keep the communication lines open, advising us whenever adjustments need to be made in any training program." Finally, follow-up communication creates new business with old customers. In writing about the trainer for a specific workforce development program, one dean/director said that after the first training experience with this company, "our trainer became knowledgeable about the company and stayed in contact with the plant and human resources managers to ensure continuity" in the college's provision of training and services.

The importance of marketing as a factor in the success of workforce development programs among deans/directors was clear. One said that, "on-going marketing is important in getting the message out and keeping the message going." Most who mentioned marketing as a factor had made "marketing a priority." One reported that it was critical to success that programs "be properly marketed to establish a market niche in the community and to be able to stay competitive with other providers in the area."

Commonly mentioned marketing approaches that brought success were the development of program-specific brochures, "participating in trade shows, chamber of commerce activities, and by partnering with other local educational providers" and the appropriate inclusion in each marketing piece or activity of all potential workforce market segments. Considered by some as a primary promotional strategy was the use of "program completer testimony, activity, and referrals." As another dean/director remarked: "The development and packaging of concise, comprehensive information regarding college services available to business and industry is of great importance. . . . Those purchasing customized training services are aided in their decision-making by evidence of past resourcefulness in serving needs similar to their own." Not to be overlooked as contributing to program success in the area of marketing was the development of "internal marketing strategies" with the client company or agency.

Recognized as important to marketing and mentioned by a number of the deans was the success created by a good strategic marketing plan

> *The audience for continuing education workforce development training is not reached through the usual general college marketing and advertising vehicles such as mass mailings. Strategic marketing plans should be employed. These include a realistic evaluation of image, crisp definition of product, identification of the critical attributes of target customers, segmentation of the target market based on strategic objectives, and selection of advertising vehicles based on market segmentation.*

Emphasis was placed by deans/directors on the plan's strategic nature, one with flexibility to respond to new information as it becomes available. When one dean/director found, for

example, that the market penetration of the college's workforce development program was just "touching the surface of the area's potential" and "less than 20 percent of the area's manufacturing community had received assistance" from the college program, the marketing plan was reexamined. The workforce development program "embarked on a new marketing campaign." One dean/director commented on the marketing plan's specific contribution to success: "Our strategic marketing plan calls for an annual growth rate which challenges us to utilize all the tools and techniques available" to create success.

Image, Single Point of Contact, and Program Staff

While the image of the college, having a single point of contact or advantageous location, and the role of program staff were mentioned by deans/directors as factors contributing to the success of workforce development programs, these factors were not mentioned as frequently as the other six factors. However, less frequent mention of these factors should not in any way diminish their importance as contributors to the success of workforce education and training. All three factors received more mention as factors rising to challenge program success because deans/directors found themselves more often confronted by blurred images, traditional educational bureaucratic structures and processes, and inadequate staffing.

Image. In mentioning image as a factor contributing to program success, deans and directors were consistent in their belief that program credibility, integrity, customer service/responsiveness, a successful "track record," and cost competitiveness were integral components. One dean/director made the following comments.

> *Credibility is crucial. Care must be taken to never sell more than can be delivered. Investment in instruction and technologies must keep pace with an expanding market and mission. The customized workforce training market has little tolerance for those who knowingly substitute for quality. Institutional commitment to broadened and forward-reaching programs must be maintained through research, collaboration, and constant internal improvement.*

Another dean or director discussed the role of integrity in image ". . . We are committed to developing long-term relationships with our clients by becoming dedicated partners in the growth and development of their organization and their employees. This can be accomplished only through the trust we develop by establishing and maintaining absolute integrity and credibility."

The mention by some deans/directors of image was synonymous with a customer-focused, responsive workforce development program.

> *The business community is already aware that customer service is essential to the success of any service or product. Colleges which back their training products with responsive service keep their customer coming back. . . . When a college responds quickly to a company's request for training, troubleshoots any real or potential problems quickly and with accountability, and is flexible and easy to work with, its customers will be more than satisfied. . . .*

The company continues to return to the college again and again . . . because they know that the college can be trusted to respond with a minimum of hassle.

Finally, for a number of deans, image as a contributor to success focused on being known for collaboration and "competitive pricing, offering programs of comparative advantage."

Single Point of Contact. When most deans/directors mentioned a single point of contact for clients as a success factor, their mention was related to providing customer service. For example, "The arts and sciences, business technologies, engineering technologies, and continuing education may all contribute to a college-wide training effort. Unless the effort is orchestrated in a coordinated fashion, business and industry become confused by the parade of programs and people." Two other deans articulated a similar sentiment. The first said, "Customers don't like being shuffled around. They want to know who to call, and they want that person to be able to take care of all of their needs." The second remarked that, "There is no faster way to dissuade a potential client or student than by not directing them effectively to the unit that can serve them. It's important for the right hand to know what the left hand is doing!"

In addition to reducing confusion and the potential for losing business, another dean/director saw a single point of contact as fostering repeat and new business. "Maintaining a single point of contract is the key to development of relationships that can be sustained over the long term. As the relationship matures, the partnership between industry and college strengthens and solidifies, resulting in new training opportunities." For another dean/director, a single point of contact meant "the ability to speak with one voice," which results "in a stronger, clearer message to the college's service area" for marketing purposes. For clients, that single point of contact can, as expressed by another dean/director, "facilitate the logistics of course development, negotiate competitive prices, work with the faculty to customize the curriculum, and advise students as to credit/ non-credit options."

For some workforce development programs, the development of a single point of contact for customers was identified as an important factor of success. A single point of contact can refer to a physical location—all services are in the same building. A single point of contact also refers to a single department or individual at the college who handles all the logistics for the customer, even though these may be located in several different areas of the college. One dean/director commented about the college's establishment "of a Business and Industry Center to be its contact with district employers seeking customized instruction, credit or non-credit, for its employees." A similar concept is at work at Collin County Community College's Courtyard Center for Professional and Economic Development, as reported in their exemplary practice summary.

More specifically, one dean/director relays the distinct advantage of the college's Regional Manufacturing Technology Center. It is located in "the center of manufacturing activity in an industrial park" and adds "greatly to the visibility and convenience of company-specific training." Bristol Community College in Fall River, MA, sees the location of their Center for Business and Industry as a single point-of-contact factor of success. According to their exemplary practice summary, this facility draws

students from Connecticut, Rhode Island, Massachusetts, and New Hampshire. It has had a positive impact "in a geographical area of the country which is still slowly recovering economically" and "has been key to the success and continuous growth in enrollment."

Program Staff. As with instructors, deans/directors spoke of the workforce education and training staff as being a factor of program success when they were "innovative, flexible, and customer oriented" and when they "know their service areas and have developed good relationships with business and industry." The mention of staff as a success factor generally referred to direct workforce development program staff and staff in the support divisions of the college, including areas such as registration, financial services, personnel, and housekeeping.

It should come as no surprise that deans/directors did not comment extensively about the contributions they or their staffs made to the success of their workforce education and training programs. However, in the survey results of the National Workforce Development Study, employers made comments about staff almost as many times as they made comments about faculty. The directors of programs and their program coordinating staffs are extremely important to employers because they are the direct providers to the employer/client.

Factors that Challenge Success

In their summaries of factors that provide support or mitigate against the success of workforce development programs, most deans and directors chose to concentrate on positive elements. They provided more factors for success and often implied that the opposite of what contributed to success worked against it. In Doucette's study (1993), the top five most commonly cited major obstacles to workforce training efforts were

- inadequate budgets to support training activities,
- the inability of employers to afford training costs,
- the difficulty in gaining recognition as a provider of workforce training,
- the lack of experienced trainers, and
- inadequate support for curriculum development and other up-front program costs.

In this study, the factor that was most mentioned as presenting a challenge to the success of workforce development programs was the educational bureaucracy, in particular, traditional bureaucratic structures, practices, and processes.

Traditional Bureaucratic Structures, Practices, and Processes

For more than 40 percent of the deans and directors participating in the National Workforce Development Study, one factor that mitigated success in workforce development programs was the educational bureaucracy, specifically, traditional bureaucratic structures, practices, and processes. Perhaps most mentioned by deans and directors was the traditional bureaucratic community college structure, one that was developed around funding. In this structure, "traditional academic or curriculum credit programs are in one container and noncredit and everything else is in another. It does not work anymore. It is a structural problem

that creates human relations problems. It pits one part of the college against the other," establishes territories and "turfism," and, as we face the new century, draws battle lines for the division of what have become scarce resources—fiscal, physical, and human. A great deal of time and effort is spent "on the resolution of territoriality issues/concerns. Time spent on these issues could be better used to sell additional contract education" or on "innovation" if the structural problem were fixed. Research by Kastsinas (1994) has identified the linking of non-credit workforce development programs to the regular college curriculum as an important challenge for community colleges.

Most deans/directors fear that while internal battles rage over control, market share is being lost. One dean/director talked of a solution

> *Most colleges are still organized by how they receive funding. If they structured themselves to serve markets and clients with products they need, colleges could better fulfill their missions. This kind of structuring would enable faculty to create credit, non-credit, short term transfer, distance, computerized, and remedial education products for a continuum of customers/learners.*

One dean pointed out that most colleges experiment with adding a corporate or continuing educational staff member to a traditional credit department instead of adding a traditional credit department to a corporate and continuing education unit.

Central Piedmont Community College in Charlotte, NC, has been incubating credit programs in the non-credit corporate education division. The result has been successful. The program and program staff learned how to be entrepreneurial to all the college's markets. Enrollment in credit, non-credit, short-term, and distance education increased.

A continuum is what is needed. According to the employer survey of the National Workforce Development Study, corporate and government/public clients seek to improve employee performance and productivity (74.3 percent) and upgrade employee skills (71.2 percent) through workforce education and training. Only 4.8 percent seek for-credit training exclusively; 38.1 percent, non-credit training exclusively. The largest number of employers (57.1 percent) seek a program of both credit and non-credit training.

Two exemplary practice summaries submitted by a dean from Maryland, focus on the solution each institution has found to the traditional educational bureaucratic structure. First, Catonsville Community College (MD) reported partnering credit and non-credit staff in 1980, with staff sharing space, instructional staff, equipment, and resources. A continuing education professional is positioned in the credit department and acts as a single point of contact for clients and students. In 1994–1995, the partnership's Applied Technology Center "generated more than $900,000 in revenue and more than 840 full-time equivalents, of which one-half were eligible for state reimbursement." As a result, two more areas have entered into a partnership: Human Services and Environmental Science. Second, Gulf Coast Community College (Panama City, FL) reported a similar collaborative arrangement of credit and non-credit programs and staff in its Computer Applications Training Program. Like Catonsville Community College they reported an increase in

enrollment from 1,760 in 1989–1990 to 5,921 in 1994–1995.

The traditional educational bureaucratic structure is accompanied by practices and processes that deans/directors saw as impeding the success of workforce development programs. "Bureaucracies, especially public institutions, have regulations and productivity guidelines not understood by the private sector." Two deans/directors elaborated: "Employers insist upon clear and simple procedures in acquiring appropriate training"; "industry expects rapid mobilization." In contrast to industry's expectations, a college's "purchasing and human resource systems and policies are highly structured, cumbersome, and resistant to rapidly changing market forces," and "business office procedures are slow and inflexible." In general, "the bureaucratic structure slows program response time." To deans/directors, slowing response time negatively affects the top factor that contributes to the success of workforce development programs: customization and responsiveness.

The development of long-term relationships is another factor contributing to success. One dean/director points out that the "traditional bureaucratic procedures and policies which delay or restrict responsiveness create huge barriers to developing training relationships." The following comments are reflective, therefore, of most deans/directors:

> *The ability of the institution to operate outside the traditional paradigm demonstrates that the college practices what it preaches and is willing to be creative and customer-oriented. Providing a simple bottom-line cost, streamlining registration and billing procedures, and limiting paperwork contribute significantly to the success of the [training] relationship. . . . If it is too difficult or complicated to do business with the college, the company will generally purchase training from other competitive sources in the private sector.*

As another dean/director stated bluntly, "It is impossible to compete with the private training sector when the bureaucracy is in control."

Another tyranny of the bureaucracy, this one of an instructional variety, found its way into the comments of more than one dean/director.

> *Trying to fit the training needs of an employer into the regular college semester, on campus (rather than on-site at the employer's location), match the training need to a regular collegiate credit course, on the college's time schedule, and when a faculty member has a light load simply does not meet the employer's need, nor does it approach fulfilling the workforce training part of our mission!*

As one dean/director pointed out, "Nothing mitigates against success any more than 'ivory tower' thinking, an unwillingness to adjust to industry's timetable or to step out of the 'traditional' mold in order to meet needs, or to be reluctant to deal with new approaches because they are different and require more creativity and perhaps working in new and different ways." Another dean/director remarked that "the volume of paperwork required to make the department's activities 'fit' the system takes away time that could be better used for servicing clients and selling."

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Inadequate Funding

Funding at levels inadequate to support (1) training, (2) equipment comparable to that found in the workplace, (3) adequate training space, and (4) the addition of needed faculty/staff was mentioned as a factor presenting a challenge to workforce training success by 38 percent of the deans/directors responding to the survey. The salience of inadequate funding as a barrier to success in the minds of deans/directors is supported by other research. In Doucette (1993), four of the top five commonly cited major obstacles to workforce training efforts were directly related to funding. A number of the deans/directors linked this inadequacy to a "failure on the part of state government particularly, and government in general to link community college workforce education and training and economic development."

Deans/directors recognize that America is becoming a nation dominated by small businesses, often unable to fully support their employees' training needs. Deans and directors, believe that if states—and thus the nation—are to maintain their global competitiveness, funds to support employers' purchase of needed training and community colleges' program expansion are critically needed. One dean/director commented that at his college "the total revenue generated by collective departments providing contracted training services is often less than the training budget maintained by some of our major clients."

A number of deans/directors believed that limited resources and funding for workforce development are the result of both college wide and academic traditions (and sometimes even state and national traditions) that favor credit courses over non-credit courses and graduates over goal attainment. Such traditions often lead to state-level funding of workforce education and training at a lower rate than that of credit instruction.

These traditions have, sometimes, also limited the degree of institutional focus on workforce training programs. These same deans and directors concluded that workforce training initiatives require an intense and sustained focus. One dean/director commented, "A major barrier to the department's success has been the shifting priorities of the college . . . and a lack of clear definition and continuity in policy for working with business and industry." Remembering the adage, "Be careful what you ask for, you just might get it," one dean/director warned that while additional state funding is much needed and the need for reasonable accountability acknowledged, sometimes government funding comes with too much paperwork: schedules, budget modifications, class sign-in data sheets, audits. At times, it is seemingly "time-consuming, busy work which takes the focus off the goal—improved/expanded workforce education and training."

The lack of adequate funding for "equipment and facilities that keep pace with changing work environments in industry" was also a factor that worked against the success of workforce development programs. It inhibited growth in the face of increased demand. One dean/director pointed out that "computer training labs have reached the point of being scheduled to the maximum degree possible. There is little flexibility available in meeting scheduling preferences of client companies." Several deans/directors remarked that "finding room on campus that is not used or claimed by credit faculty" was difficult. Another dean/director elaborated on the need for training on special-

ized equipment: "Industry training often takes special technical or industrial equipment that is either not available or that takes time to order and set up. Additionally, this type of training takes dedicated space, which is currently limited." Some programs have sought relief through "finding an alternative location for the business and industry training," partnering with business/industry or government agencies or both for the building of new space, or for providing "on site industry training." However, these activities were recognized as temporary solutions to a long-term threat to success, inadequate funding for space and equipment needs.

Deans/directors also mentioned a lack of funding support for adequate faculty and staff as a factor working against the success of their programs. As one dean/director remarked, the college's program "tends to be a training ground for good instructors, but instructor salary levels generally are not high enough to compete with private opportunities." Some deans/directors found that "it is often difficult to find instructors in specialty, technical/industrial areas. The hours they are needed are often the biggest drawback, for they often have other employment obligations" that "are full-time and pay more." Other deans/directors mentioned their "greatest barrier to success is a small staff." One reported that: "for the past three years there have been only two Training Consultants to cover an 11-county district. Time is not available for marketing of services to increase the client base." Another echoed that sentiment by saying, "Currently, most individuals in our contract education program are employed on a part-time basis. Because they are stretched thin in an effort to service existing clients, they have little or no time to pursue new clients and, thus, expand programs." To these deans/directors, having no opportunity to expand their college's programs because of insufficient numbers of qualified faculty or staff means that clients go underserved or unserved, a workforce underdeveloped.

Lack of Employer Recognition of Need

According to the deans and directors of workforce development programs, employers do not always recognize the importance of training to their long-term competitiveness, or employers simply balk at investing in training unless it can be shown to improve the bottom-line in the short-term. This failure of employers to recognize the need for workforce education and training was a factor identified by 30 percent of the deans and directors as working against the success of workforce development programs. "Employers need to be educated about the importance of their workers attending training on a consistent basis, with released time."

Deans/directors identify one element in particular that indicates a failure to recognize the need for employee training: the "failure of employers to do strategic planning initially." That lack of planning makes more difficult "conducting a valid needs assessment, developing a customized program, budgeting for the cost of training, and scheduling training" more difficult.

One dean/director pointed to a second element demonstrating employers' failure to recognize their training needs. "Industries and businesses often find that they have limited time available for training and development and often delay scheduling training. This can happen when they set overriding priorities or circumstances change." One of the changed

circumstances could well be downsizing in today's economy. One dean reports that "as some companies downsize, they find they do not have the depth to send some employees to training and still keep the plant operational."

A third element is that many businesses continue to see training as an unnecessary expense, not as a long-term investment (Falcone, 1994). "Time in the classroom is not viewed as productive time and sometimes results in off-shift classes," stated one dean/director. The dean/director went on to note that "rotating shifts and twelve-hour shifts require considerable creativity in scheduling multi-meeting classes." The special creativity required in scheduling could be found, but troubling to this dean/director and others was the lack of commitment on the part of employers to workforce education and training, which "may in the future be their salvation."

On numerous occasions in their comments, deans/directors indicated the threat to success posed by a lack of commitment to training from "the top down to the supervisor on site." In fact, floor supervisors are often a key factor challenging program success. One dean/director commented extensively on the relationship of the floor supervisor to the experience and the provision of workforce education and training.

> *Production needs often interfere with a participant getting to every class on time. If a participant's job is not being covered while s/he is attending class, the job falls behind, and the person goes back to the job frustrated. The day-to-day, on-going support and attitude of the supervisor concerning the program instills in employees the importance of education, for better or worse. The educational levels of the supervisors and co-workers are often a key factor in the level of support for a participant attending class, and supervisors lacking basic skills tend to be reluctant to encourage employees to better themselves through education.*

Deans/directors have seen the negative effect of that failing to have incentives for employees participating in workforce training has. As deans/directors point out, incentives are a "form of company support." Incentives do not have to take the form of cash; they can be time off or the opportunity for additional staff development. "The key is to find out what kinds of incentives are valued by the employees." One dean/director relayed that "successful workplace programs . . . are held on company time, with a recognition ceremony on company time as well."

The results of the employer survey conducted as part of the National Workforce Development Study indicate that now is the time to begin educating employers about the value of training. Those results indicate that 31.6 percent of the employers responded that 26 percent to 50 percent of their current workforce needed training. Slightly more than one-fourth (25.1 percent) indicated the need for training of 51 percent to 75 percent of their workforce.

Marketing

While deans and directors did not mention marketing in large numbers as a factor that worked against the success of workforce development programs, the results of the employer survey prompted the inclusion of this factor. In

the results of the employer survey, aspects of community college workforce development programs were given favorable ratings, probably as a result of their companies' and employees' experiences. However, more than 7 in 10 employers reported limited familiarity with the variety of college workforce training programs. This generally favorable, but blurred image of community college workforce development programs among employers is a finding which has been confirmed by other research (Barber & Quinley, 1994; Falcone, 1994; Kent, 1996). Dean/directors of workforce education and training programs, similar to employers, attributed the limited familiarity with programs to inadequate funding for workforce development promotion. Deans/directors also mentioned that the limited size of their staffs, who are currently stretched to capacity, also reduced their marketing/promotion effectiveness.

Several deans/directors pointed to inadequate marketing as a reason for limited market penetration. However, several others mentioned that successful programs were often the best way to spread the word about quality and to improve market penetration. One dean/director noted, "As we have worked with a variety of projects, the expertise of the staff has grown, and the college has come to be recognized as a leader in training. The continued success of the programs we develop and manage for our client companies has led to increased business."

Cost

Deans and directors did not often mention cost as a factor rising to challenge the success of workforce development programs. However, the results of the employer survey, part of the National Workforce Development Study, promoted the inclusion of cost as a factor that impedes workforce education and training success.

According to the results from the employer survey, cost effectiveness was the primary reason employers chose community colleges as their workforce education and training providers. Comments made by deans/directors about successful programs focused on the community college's ability to provide "cost-competitive" training of "comparative advantage." Reference was made by one dean/director to the success that had resulted from a leadership "philosophy which balances community service and revenue generation."

However, one dean/director offered a reminder about the competitive, changing environment. "As companies are being required by their customers to improve quality and productivity while reducing cost, they in turn are requiring the same of their suppliers. They want more for less; or at the very least, the most for each dollar spent." A number of deans/directors referred to some practices that may affect a community college's ability to meet that market challenge. They reported that often "non-credit departments are assessed a high overhead by the college," or at the least they are "expected to be self-sufficient." This "forces higher tuition rates than our competitors."

To contain costs, one dean/director suggested that programs "can capitalize on long-term relationships and partnerships." An alternative approach was offered by another dean.

> *Highly specialized courses and custom contract training can command a premium price, but the most popular courses, such as "desktop computer applications," are more widely available in the marketplace*

so are perceived as a commodity. That is, the customer perceives the results being pretty much the same wherever the product is purchased, so price becomes the determining factor. If competitive pricing levels cannot be achieved, then the image of the training needs to be changed to emphasize unique attributes such as exceptional instructors ('learn from the experts'), convenience of time or place ('on your site at your time'), or upscale facility ('state-of-the-art training center').

Regardless of the avenue taken, whether to contain costs or change the image of the training, for example, "workforce training must be affordable."

Summary

The words of the deans and directors in this chapter not only reinforce the findings from the survey of employers but also provide additional insights into the success that community colleges have experienced in their role as a deliverer of workforce education and training. Deans/directors wrote that the success of workforce education and training rests on the following factors:

- customization and responsiveness,
- leadership support and a commitment to workforce education and training as a core mission,
- comprehensive assessment/evaluation systems,
- the quality of instructional staff and instruction,
- partnerships,
- communication and marketing,
- image,
- a single point of contact, and
- program staff.

They also identified a number of factors that challenge the success of workforce development programs:

- traditional bureaucratic structures, practices, and processes;
- inadequate funding;
- failure of employers to recognize the need for training;
- limited marketing about the scope of workforce development programming; and
- the failure to remain cost-competitive.

Education is a $600 billion dollar industry. As a percentage of the gross national product, that figure is second only to health care and exceeds defense spending. Of that figure, over $40 billion is spent on training and development programs for businesses and public institutions (McKinley, 1996). This figure, however, represents only 1.5 percent of the American corporate payroll budget; businesses in Japan and Europe spend 5 percent or more (McKinley, 1995).

If corporate America is to keep its competitiveness in the global marketplace, it must invest more in its people. America's community colleges, as they have historically, must stand ready to turn that investment into dividends. Capitalizing on the factors of success and taking a proactive stance to eliminate or at least mitigate the factors of challenge will ensure the

position of the nation's community colleges as the providers of choice, as the pre-eminent deliverers of workforce education and training.

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CHAPTER 7

Discussion of Survey Results: Employers and Deans and Directors

The results of the National Workforce Development Study support four general conclusions. These conclusions are based on the findings of the survey of employers, the factors and exemplary practices summaries written by the deans and directors of workforce development programs, and corroborating results from other studies. The conclusions, summaries of results that support the conclusions, and a brief discussion of their significance form the basis for this chapter.

Conclusion 1. The American system of community colleges is responding to the needs of American-based businesses and organizations for workforce education and training.

Types and Sizes of Employers Served

American community colleges provide workforce education and training to employers and employees in all types and sizes of businesses and organizations in the United States. Of the employers who responded to the survey, the greatest concentration of service was in the industrial/manufacturing, government/public, and health services. They accounted for two-thirds of all employers served by community colleges.

Slightly less than one-half of the businesses served were small, with 100 employees or fewer. Less than one-third of the businesses were mid-sized (from 101 to 500 employees). Large establishments (501 or more employees) represented more than one-fifth of the total number of employers served by community colleges.

The focus of community college workforce development programs on small- and mid-sized businesses and organizations is important for at least two reasons. First, small- and medium-sized businesses are the acknowledged engines of economic growth in the United States (AACC, 1993). Second, according to a recent

Bureau of Labor Statistics study, small- and mid-sized businesses are much less likely to conduct training in all areas than are larger establishments (Frazis et al., 1995). Both respondent groups—the employers and the deans and directors—noted that small businesses often have difficulty participating in training. Two reasons offered were that these businesses/organizations were too small to yield the sufficient number of employees needed for contracting customized programs or they have insufficient funds to pay for training, or some combination of both factors.

In part, the community college system has attempted to circumvent this dilemma of high need and low resources by forming coalitions. Creative partnerships with business, industry, labor, government, and other education providers to deliver high-quality training at reasonable costs to small- and medium-sized businesses and organizations are characteristic of many community college workforce development programs.

Goals and Selection Criteria for Education and Training

American-based businesses and organizations need employees with world-class skills to keep pace with technology and to compete in the global marketplace. Emerging and existing workers need a firm foundation in basic communication and computation skills, expertise in technical and other skills related to specific enterprises, the ability to work with others in solving problems, and strong work ethic qualities (Carnevale, Gainer, and Meltzer, 1988). These factors are reflected in the survey responses and in the comments of employers responding to the study. These factors are also consistent with the findings of a recent Bureau of Labor Statistics study (Frazis et al., 1995).

Almost three-fourths of the employers surveyed sought workforce education and training to improve employee performance and productivity or to upgrade employee skills. Almost one-half of the businesses and organizations contracted for workforce training programs with the goal of professional development or for the self-enrichment of their employees. Smaller proportions sought training because it was required by the profession of the employees or because suppliers or customers expected it.

To bring their workforce up to the needed skills levels, employers are looking for high-quality, cost-effective, and conveniently located and offered workforce education and training programs. Most education and training programs require customization to meet specific industry needs. Although many large companies continue to conduct their own training, the proportion doing so has dropped from 90 percent in 1980 to 50 percent in 1991, according to an American Society for Training and Development study (1991). In addition, small- and medium-sized companies typically look to meet their training needs from outside their companies to a much greater extent than do larger firms. In a recent *Nation's Business* "Where I Stand" poll (1995), two-thirds of the businesses responding to the survey felt that public and private schools (including community colleges) should have the primary responsibility for educating and training their workers.

In the National Workforce Development Study, slightly more than two-thirds of the corporate and non-profit clients chose community colleges to meet their need for workforce training because they perceived community colleges to be a cost-effective value for their investment.

Roughly one-half of the employers chose community colleges because the training program was customized to meet specific needs, the training was held at convenient on-site locations, the quality of instruction was good, and past results led to additional contracts. A small proportion of employers chose a community college on the basis of a referral from other businesses. Both employer comments and the summaries written by deans and directors corroborated these survey results. Comments made by employers and deans/directors also pointed out the critical importance of administrative staff and evaluated the staffs' current performance as high in quality.

Types of Education and Training Needed

The need for workforce skills education and training in almost all skills areas was uniformly high. Of the 12 areas from which employers could respond, 10 were seen by 50 percent or more of the employers as "needed" or "much needed." Areas needed most (defined as 75 percent or more of employers indicating "needed" or "much needed") were professional development, computer skills, interpersonal skills, and critical thinking. Specific skills areas needed second most (defined as 50 percent to 74 percent of employers indicating "needed" or "much needed") were communication skills, business skills, government regulations, personal skills, technical skills, and computation. The specific skills areas, "global understanding" and "English as a Second Language," received a lower indication of need than did the other items.

Professional development, the most requested need area, was defined in the study as including basic supervision, total quality management, and time management. These factors reflect the business environment in many companies today: to compete in the global marketplace, many companies are converting to high performance or total quality management principles. A company's transition to a high-performance organization requires extensive start-up education and training and a consistent program of ongoing education and training. A high-performance organization, by necessity, needs extensive education and training in several of the skills areas listed in the study:

- interpersonal skills: interacting with others and working in teams
- critical thinking skills: problem solving, creativity, learning how to learn
- personal skills: responsibility, self-esteem, integrity, and honesty
- business skills: business writing, marketing, and customer service
- communication skills: reading, math, listening, and speaking
- computational skills: basic math, charts, and graphs.

Indeed, high-performance companies conduct and contract for education and training at a higher rate than do companies that do not regularly employ high-performance business practices (Phipps, 1995). Several of the exemplary practices submitted by the deans and directors of workforce development programs described an education and training program centered around transforming a company to a total quality management environment.

The second highest need area, computer skills—training in areas such as word processing,

spreadsheet applications, and database management—reflects the continued modernization of the workforce through technology. Computer skills training is one of the most common courses offered by community colleges for workforce development (Doucette, 1993). The skills area, government regulations, is also reflective of the American business environment. Skills training in technical specific areas, indicated as high need in the National Study, was certainly expected. Often technical skills training requires the highest degree of customized training.

The training areas, "global understanding" and "English as a Second Language (ESL)", were needed relatively less often by employers. The level of training needed in these areas is probably more sensitive to the location or type of business or both than are other skills areas. If a company is located in a highly diverse area, for example, south Texas, or if a company is a major exporter of goods and services, the need for ESL or global understanding may be much greater. As the globalization of the economy continues, the workforce of tomorrow will be expected to have a firmer understanding of the world's cultures than is the case today.

Employers are most interested in programs that include non-credit and credit classes (57.1 percent) or programs with only non-credit classes (38.1 percent). With more than one-half of the employers wanting both credit and non-credit classes, it is important that the relationships between these two areas at individual community colleges are positive. It is also important that any problems of "fit" between credit and non-credit programs are transparent to business and industry clients. The deans and directors of workforce development programs have identified this division of instruction around funding rather than around employee need as problematic. In addition, Doucette (1993) found that the credit faculty's opposition or lack of support for the workforce development mission was a factor that influenced program success.

More than 8 in 10 employers saw one or more of the distance-learning technological approaches to instruction as a potential benefit to workforce education and training efforts. Almost three-fourths of the employers checked one or more of the telecommunications options (e.g., video-based, teleconference seminars, television-based). Video-based training received the largest single-item response, with more than one-half of the employers checking this item. Compared to more traditional approaches, distance learning approaches may be able to reach more employees in a more efficient manner and at a lower cost. The deans/directors of workforce development programs reported that many employers resist instructional programs that are delivered exclusively or primarily in the traditional lecture format.

Conclusion 2. The American system of community college workforce education and training is providing high-quality, flexible workforce training programs to American-based businesses and organizations.

Factors of Success in Workforce Development Programs

Quality of Workforce Education and Training

In the employer survey, the quality of the training provided by community colleges was rated

as "good" or "excellent" by 96 percent of employers. Rating of other facets of community college education and training programs were similarly high, with "good" or "excellent" ratings varying from 86 percent to 91.4 percent. The other rating categories related to training programs included "responsiveness to employer needs" and "the cost of training." Ratings were also given for the skills of employees trained by American colleges in technical areas, computation, interpersonal skills, and communication skills. Almost all (95.1 percent) of the businesses and organizations in the survey would recommend community college education and training programs to other businesses. Four percent of employers were not sure, and less than 1 percent would not recommend a community college.

Quality of Training, Instruction, and Support

At the core of any educational effort is the quality of the instructional staff and instruction. One-half of the employers indicated that the quality of instruction was an important reason for selecting a community college for workforce education and training. Ninety-six percent of the respondents rated the quality of the training provided as "good" or "excellent." Approximately one-half of the deans/directors mentioned the quality of instructional staff as a key factor in the success of workforce development programs. Both deans/directors and employers saw community college faculty as qualified, knowledgeable, and committed professionals. Instructors were student- and employer-centered. They were willing to quickly design and adopt innovative curriculum and instructional delivery approaches to meet the practical challenges of on-the-job realities. Results of the National Study showed that without credible expertise in the instructional staff, the corporate and non-profit client would not consider the college as a viable supplier of training services. Without consistent delivery of high-quality instruction, employers will not return for additional education and training.

Employers and deans/directors spoke of the workforce administrative staff and other support staff at the college almost as frequently as they spoke about instructional staff. All were considered a factor of program success when they were innovative, efficient, flexible, knowledgeable, and customer-oriented. Since the employer/college interaction often centers primarily on the administrative staff, this relationship is central to the success of workforce development programs.

Responsiveness

Tied closely to the changing needs and economic futures of their local communities, community college workforce development programs adapt to changing conditions in their service areas. The highly responsive nature of community college workforce education and training programs was the top contributor to program success, according to the analysis of the comments of deans and directors. It was the second most frequently mentioned item of positive comment by employers.

The businesses and organizations surveyed reported that training programs customized for their needs and the convenience of programs offered on-site were the second and third most influential reasons for choosing a community college for workforce education and training, respectively. It is often the willingness to be flexible and the speed of the response that gives the community college the competitive edge in the workforce education and training market.

In successful community college programs, responsiveness and flexibility permeate every aspect of the workforce development program, including instruction, curriculum content and design, administrative support systems, class delivery approaches, and pre- and post-assessment procedures.

Cost-effective Training

Cost effectiveness was the most cited reason by businesses and organizations for choosing a community college for workforce education and training. More than two-thirds of the employers noted it as *the* reason. However, 4 in 10 of the written comments made by employers expressed concern about costs, and several employers reported that they were looking for different sources of training due to high cost.

Although not one of the more frequently cited barriers to success, several deans/directors expressed concerns about costs. One dean/director said that companies are doing more with less, and they expect their service providers to follow suit. Other deans/directors pointed to college practices or state funding policies that are beginning to place workforce development programs at a cost disadvantage. Partnerships with business, government, and other educational service providers, especially long-term arrangements, are a common approach to reduce cost and increase or maintain quality.

Assessment and Evaluation Systems

An integral part of many workforce development programs is the assessment and evaluation system that both helps develop the program and measure its effectiveness. Almost two-thirds of the deans/directors mentioned assessment/evaluation systems as a factor that contributed to the success of their workforce education and training programs. Included in this factor were assessments of employer needs and employee skill levels, program outcomes, and environmental scanning. To many deans/directors, assessment was directly related to the effective customization of training and delivery that results when comprehensive needs assessments are conducted. Environmental scanning assists colleges in their efforts to proactively prepare for future needs, and, therefore, deliver services in a timely manner.

However, in the survey of employers, many respondents felt that inadequate assessment left them with too little information about student program outcomes to make judgments about the quality of the program. Several employers commented that an improved assessment of student outcomes was needed. The lack of objective assessment procedures, especially in small businesses, was also noted in a recent national survey of employers (Frazis et al., 1995).

Conclusion 3. Current projections clearly indicate not only a continued need but also an increasing need for education, training, and retraining programs for American-based businesses and organizations.

Consistent with other national findings, American-based businesses and organizations reported that a substantial proportion of their current workforce needed additional education and training (Dilcher, 1991). Roughly one-fifth of the employers in the National Study estimated that more than 75 percent to 100 percent of their current workforce needed additional training. Cumulatively, almost 50 percent of

employers estimated that 50 percent to as much as 100 percent of their workforce needed additional training, and more than 75 percent of employers reported that 25 percent to as much as 100 percent of their workforce needed additional training.

The magnitude of this need is growing as advancing technology, fast-paced innovation, global competition, and substantial changes in the composition of the workforce continue to require ongoing training. The U.S. Department of Education considers technology to be the primary force driving the transformation in today's workforce (U.S. Department of Education, 1992). Of the employers responding to the survey, almost 100 percent saw technological change as increasing their need for workforce development. Slightly less than one-third of the employers indicated the requirement for education and training was affected by technology to a "considerable extent."

Both the employers responding to the survey and the deans and directors of workforce development programs noted the importance of technological currency in instructional content and equipment. Several employers and deans/directors believed that the community college is behind or rapidly falling behind in this area and that this deficit is directly related to funding.

Conclusion 4. With needed support and changes, both external and internal to the community college, the community college system of workforce education and training is in a position to meet these increased demands for workforce development.

Leadership Support and Commitment to Mission

The second most frequently cited success factor by deans/directors was leadership support and commitment to the workforce development mission. The deans/directors reported that college leadership and support from the president, the senior leadership/management, the governing board, and all levels of the organization is paramount. With only a few exceptions, the deans and directors reported that the senior management at their colleges was very supportive of workforce development. However, they also noted that, as this mission role expands in importance, the relationship with the traditional, credit side of the college will require attention.

As critical as college leadership is the leadership within the businesses and organizations themselves. Without direction, commitment, and consistent support from a company's management, a workforce education and training program will not be successful. Company leadership must be full partners with their community college's workforce development program, helping the college decide what, how, and when to offer education and training.

Finally, the support of county and state agency heads charged with economic development is vital to a successful workforce development effort. Government must include community colleges as a full partner in its overall strategy for economic development. Several of the deans and directors also pointed to other important roles government can assume, such as conducting regional needs assessments to determine the best directions for education and training or conducting promotional campaigns to better inform business and industry about

the programs and services available through community college workforce programs.

Partnerships

To create the well-educated, well-trained, highly skilled, and competitive workforce needed in the new global economy, the former Secretary of Labor Robert Reich suggests that higher education must actively engage in partnerships with other educational sectors, employers, and workers (Reich, 1993). Almost three-fourths of the exemplary practices reported by deans/directors concern partnerships with employers, governments, service and professional agencies, and other education and training providers. These workforce education and training partnerships take place on many levels. For example, they can include jointly evaluating specific training needs and screening and pre-testing employees; sharing facilities, equipment, and faculty; locating support services at common locations; and forming consortia of smaller businesses that need the same training.

Partnerships can be an effective method of responding to cost pressures; they can assist community colleges in remaining cost-competitive providers of workforce education and training. Often the most successful partnerships are long-term, market-driven, and multiple-level arrangements between the college and business or industry. Partnerships are often the best vehicle for being responsive to employer needs.

Image, Communication, and Marketing

Community colleges generally enjoy a positive image in the communities they serve. However, although positive, the image of community colleges is characteristically blurred (Barber and Quinley, 1994; Kent, 1996). The absence of a clear understanding of the range of offerings within the workforce development programs of community colleges negatively affects the image of community colleges as the pre-eminent workforce development providers. In the National Study and in other research, the absence of understanding is often attributed to inadequate communication by the college (Falcone, 1994). A clear image concerning college workforce development programs is of particular importance because "no other division within the community college system has had such an impact, either for better or worse, on the image of the college within the community" (Kothenbeutal and Dejardin, 1994, p. 27). In many instances in the National Study, employers had the same image of the college's workforce development program as they did of the college as a whole.

Although the employers in the National Study were recipients of community college workforce programs, the majority of respondents possessed only limited familiarity with workforce development programs and services. Only about one-fourth of the employers were "very familiar" with community college workforce development programs, six in 10 were "somewhat familiar," and 13 percent were "not very familiar."

The lack of familiarity of employers with the full range of workforce education and training programs available through the community college was commented upon by several employers and deans/directors. They believed that a focused, ongoing, professional promotion and marketing process needed to be a major part of every workforce development program. In their comments, deans and directors attributed the blurred image of workforce development programs to the lack of allocated resources for

marketing, promotion, and follow-up communication. Limited resources limit marketing, and limited marketing limits the degree of market penetration.

Single Point of Contact

Developing program processes that emphasize a single point of contact for employers is one way many colleges improve the effectiveness of the services they provide. A single point of contact clarifies who the employer needs to call for comprehensive services. It can also make the sometimes rough interface between credit and non-credit programs seem transparent to the client, and it can foster repeat and new business. The single point of contact may mean a single office of contact, or the concept may refer to a single geographical location that is convenient to client needs.

Traditional Bureaucratic Structures, Practices, and Processes

For almost one-half of the deans/directors, the educational bureaucracy was a factor that impeded success in workforce development programs, specifically traditional bureaucratic structures, practices and processes. Factors most mentioned were funding biased toward credit courses, instruction frozen in traditional paradigms, and unclear and cumbersome business practices in areas such as registration and billing.

The deans and directors made special mention that the interface between credit and non-credit units in many community colleges is problematic. According to Katsinas (1994), "the central challenge for community colleges will include linking non-credit workforce development programs to the regular college curriculum." A small number of employers expressed concern about the level of bureaucracy, their resulting frustration, and loss of speed to market. The intensity of these employer comments suggest that severe problems here may lead to the loss of customers in the future.

Lack of Employer Recognition of Need

The failure of employers to recognize the importance of education and training was the third most frequently cited barrier to success by deans and directors; one-third of them mentioned it as a limiting factor. Employers do not always recognize the importance of education and training to their long-term competitiveness, or employers simply balk at investment in training unless it can be shown to improve the bottom-line in the short term. Many companies also fail to see the need to provide incentives for their employees to participate in training. Without this recognition of need and without careful attention to employee considerations, the workforce skills issue will not be adequately addressed.

Role of Government, Budgeting, and Limited Resources

Many colleges see the development of state funding programs to improve and expand workforce education and training as a key role of government. Funds for the employer to purchase needed training, funds to support community college program expansion, and funds to enable community colleges to continue to offer reasonably priced programs and services are critically needed, according to the deans and directors of workforce development programs. Several of the exemplary programs detailed by the deans/directors stressed the importance of

state funding to the success of their workforce development programs. A number of the deans/directors tied insufficient funding to the failure of state government to clearly link community college workforce education and training with economic development.

Several of the deans and directors also pointed to other important roles that government can play. They could, for example, conduct regional needs assessments to determine the best directions for education and training, or they could conduct promotional campaigns to better inform business and industry about the programs and services available through community college workforce programs.

The most serious limitation identified concerned the lack of all types of resources. They included budgets inadequate to

- support training activities;
- assist employers, especially small and mid-sized businesses, with training costs;
- promote community college workforce development programs, which lead to recognition of community colleges as the choice for workforce training;
- hire experienced trainers in some areas; and
- provide adequate training space, current equipment, responsive curriculum development, and the other up-front costs associated with workforce development programs.

These results were very similar to results of the workforce study conducted by The League for Innovation in the Community College (Doucette, 1993).

A number of deans/directors indicated that limited resources can often be the result of both college wide and academic traditions that favor credit programs over non-credit programs. Such traditions often lead to state-level funding of workforce education and training at a lower rate than that of credit instruction. These traditions have also limited the degree of institutional focus on workforce education and training programs and contributed to the assignment of a lower priority to the needs of these programs.

For example, limited resources for equipment updates are often funneled to other areas of the college. Finding rooms on campus that are not claimed by credit faculty is reported as often problematic. Finally, as mentioned by deans/directors, the administrative staff within workforce development programs is often characteristically small in relationship to the demands in this area.

Epilogue

Educating and training a world-class workforce is the key to America's economic growth and ability to compete in the global marketplace. American community colleges are well positioned to become the pre-eminent delivery system of workforce education and training, providing high-quality, cost-effective, and responsive workforce training to prepare a skilled workforce for the 21st century.

The American Association of Community Colleges' policy paper on workforce training (1993) emphasizes the critical nature of workforce training at this point in our history (American Association of Community Colleges, 1993):

"The task of educating and training a world-class workforce that can think for itself

and outperform the rest of the world is formidable, but the stakes have never been higher nor the potential rewards greater. If the nation fails to develop a workforce that can compete successfully in the global economy, it will be unable to provide the living standards to which its citizens have become accustomed; the gap between the rich and the poor will widen; and the nation's position as world leader will erode sharply. However, if the nation can respond effectively to the challenge to develop the most skilled and adaptable workforce the world has ever seen, it will ensure the prosperity of its citizens into the second American century (p. 12)."

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CHAPTER 8

Conclusions, Implications, and Recommendations

The task of educating and training a world-class workforce that can think for itself and outperform the rest of the world is formidable, but the stakes have never been higher nor the potential rewards greater. If the nation fails to develop a workforce that can compete successfully in the global economy, it will be unable to provide the living standards to which its citizens have become accustomed; the gap between the rich and the poor will widen; and the nation's position as world leader will erode sharply. However, if the nation can respond effectively to the challenge to develop the most skilled and adaptable workforce the world has ever seen, it will ensure the prosperity of its citizens into a second American century.

The Workforce Training Imperative: Meeting the Training Needs of the Nation, American Association of Community Colleges, 1993.

Purpose of the Study

People, and their collective abilities to be productive, drive our economy. A skilled and productive workforce is, therefore, essential to a strong economy. Over the past 30 years, America's community and technical colleges have become major providers of high-quality workforce training to business and industry. Now, our businesses are faced with increasing competition and greater training needs. The overarching purpose of the National Workforce Development Study, contained in this book, was to establish a blueprint for building a stronger economy through the 21st century by identifying the current and future training needs of employers and by reviewing current workforce training services provided by community colleges.

The broad questions of the study were:

1. What are the training and retraining needs of businesses and organizations in America?
2. How can American community colleges best meet these needs?

The specific objectives of the study follow:

- document the value of community colleges in providing workforce training
- explore the extent and nature of the training needs of the current national workforce
- identify factors that contribute to or rise to challenge the success of workforce training efforts
- illustrate the national results and discuss for state and national policy-makers the implications of community colleges as the nation's preferred workforce training delivery system.

Conclusions

The conclusions and implications of this comprehensive study illuminate the workforce training needs of America and prescribe how community colleges, employers, and government can best meet those needs. The study includes quantitative survey data as well as qualitative written survey response information. This survey data, when combined with the information included in the other chapters of this book, generated the following conclusions;

1. All types and sizes of businesses are being well served by community colleges, which are the logical choice for providing workforce training, given their cost effectiveness, responsiveness to employer needs and high quality of instruction.
2. Three-quarters of employers in the study indicated that 26 percent or more of their current workforce needed to improve their performance, and many employers identified community colleges as the preferred trainers to meet this need.
3. Employers must make increased investments in the education and training of their employees to achieve high-performance organizations.
4. Current training projections indicate an increasing need for the training and retraining of America's workers with both private and public employers.
5. Community and technical colleges must continue to provide customized training through a variety of delivery methods to meet employer and market demand.
6. Community and technical colleges must constantly monitor market needs, develop appropriate training, and deliver that training in a cost-effective, efficient manner.
7. Community and technical colleges must provide consistent, high-quality services in a non-bureaucratic, flexible manner.
8. Government (federal, state, and local) should support community and technical colleges as the pre-eminent providers of workforce training.

9. Government should include community and technical colleges as preferred workforce education training providers in job training legislation.

Recommendations

Certain recommendations have been deduced from the research data and information from the study. They are provided here in a categorical format that relates specifically to businesses, community colleges, and government. It is hoped that these recommendations will be widely accepted and strategically implemented. If this is achieved, then the respective business, community college, or governmental agency will be contributing greatly toward a stronger economy for the United States and her citizens.

Recommendations for Business and Industry

The Partnership for a Smarter Workforce—consisting of The Manufacturing Institute, the Council on Adult and Experiential Learning, and the Industrial Services Program, a private-public venture designed to help small- and mid-sized manufacturers—calls for companies to become high-performance work organizations. They can achieve this goal only by having a highly skilled workforce and an environment that encourages continuous learning.

All private and public employers must learn that the best investments they can make are in their people. For decades many employers thought that the way to high profits and quality performance was through the acquisition of the best equipment and the best chief executive officers. They would think nothing of investing 15 percent of their budgets in equipment yet might spend only 1 or 2 percent of their budgets on staff development, and that was mostly on executive training. Today, largely due to global competition and the quality improvement movement, most American businesses understand the necessity of investing heavily in their people . . . all of them. The following recommendations are provided to help all organizations which employ people to become high-performance work organizations.

1. Businesses and industries should recognize that continuing education and training for all employees is a priority and a permanent cost of doing business.
2. Businesses and industries should recognize that employees are an organization's first, and, in many ways, most important customers.
3. Businesses and industries should provide incentives and an environment for employees to learn the skills necessary for high performance.
4. Businesses and industries should demand quality education and training services in academic, technical, and social skills.
5. Businesses and industries should outsource training when it makes sense and hold the trainers accountable.
6. Businesses and industries should establish strategic long-term partnerships with America's community colleges for the continuous enhancement of employee skills.

7. Businesses and industries should assist community colleges with legislative policy development and funding support. It puts corporate tax dollars to great use.
8. Businesses and industries should demand high performance from all suppliers.

Recommendations for Community Colleges

Most community colleges have realized that workforce development is the market niche that they best serve, not withstanding college credit transfer degrees. The corporate and continuing education "shadow colleges" have become beacons that are guiding these colleges into a new dimension of service to communities and their students. Clearly, education must not exist in a vacuum. Community colleges have a compelling obligation to change with the needs of employers and the communities they serve. Changing needs lead to rising expectations and call for different strategies to meet them. America's community colleges should be at the forefront in designing and delivering those strategies, especially strategies for producing a world-class workforce (Myran, Howdyshell, and Zeiss, 1995). The following recommendations are provided for all community and technical colleges that wish to contribute to the solution of America's most significant challenge of the twenty-first century—workforce development.

1. Community college leaders, including trustees, should strongly consider positioning workforce development as a core mission.
2. Community colleges should establish high visibility through comprehensive marketing and promotion campaigns and seek to be recognized as the premiere workforce trainers in their service areas.
3. Workforce training should be integrated into the organizational structure and the college environment with an emphasis on flexibility and responsiveness for both credit and non-credit instruction.
4. Community colleges must become completely customer-focused, providing comprehensive and customized assessment, training, and employee retention services in a cost-competitive fashion.
5. Community colleges must transition from teaching to learning organizations, which recognize that faculty and staff learning is critical to the organization, its students, and its community.
6. Community colleges should continue and expand their collaborations with government, private businesses, chambers of commerce, economic development groups, schools, and other community organizations, thus creating long-term partnerships for workforce development.
7. Community colleges must work closely with business and industry to keep abreast of workforce development needs, including the comprehensive range of academic, technical, and social or life skills.

8. Community colleges must focus on the development and delivery of quality programs and faculty to meet current industry training needs as identified by this national study: professional skills, computer skills, interpersonal skills, critical thinking skills, communication skills, business skills, government regulations, and personal skills.
9. Community colleges should take advantage of existing technologies and information (e.g., NETWORK, IPSI software) for the quick development of curricula responsive to employer needs.
10. Community colleges, as part of their portfolio of comprehensive assessment of workforce education and training needs, should be prepared to examine business and industry structures and work processes in order to improve the competitiveness of the companies and provide the education and training required.
11. Community colleges must assist business and industry, through environmental scanning, to remain competitive by training employees for jobs of the future and to be lifelong learners.
12. Community colleges must take a more proactive role in influencing governmental policy and law that affects workforce development, such as state funding legislation, using their business partners for support.
13. Community colleges, in cooperation with employers, should establish standards for excellence in workforce development curricula and teaching.
14. Community colleges must become more enterprising, partnering with business and other organizations to leverage resources and provide quality education and training.
15. Community colleges must examine the usefulness of alternative delivery methods, including distance learning, interactive video, and other technologies.
16. Community colleges, in order to continue improving their training and services, should consider benchmarking with their competitors (e.g., private consultants, training firms, company training divisions), not just their colleagues in education.
17. Community colleges must improve their assessment of the value-added impact and return on investment of their education and training programs—for employers and their own use—through the development of better outcomes measures and economic impact models.

Recommendations for Government

Most community colleges are a function of government, are funded by government, and are regulated by government. These colleges

also provide training for government workers. With such deep integration, it is appropriate that recommendations for government should be included in this study. The following recommendations are provided for federal, state, and local governments, where applicable.

1. The federal government and respective state governments should establish workforce training as the fundamental element of any economic vision and recognize community colleges as the preferred providers of that training.
2. Government should provide meaningful incentives to employers for investing in worker training and provide incentives to community colleges to become more involved in worker training.
3. Government should deregulate community colleges' fiscal processes where possible to encourage the delivery of customized, flexible instruction based upon employer needs.
4. Government should recognize the value in strategically investing in workforce training, both credit and non-credit, by properly funding community college worker education and training. Current funding and auditing processes are not generally supportive of emerging workforce training demands.
5. Government should use community olleges as the centerpiece of any post-secondary workforce development legislation or job training initiative.

Summary

A recent position paper that emanated from the American Association of Community Colleges' Commission on Workforce and Community Development summarizes this whole matter quite well. America's community colleges are ready and willing to play a leadership role in the nation's workforce development future. This has been the historic and traditional (albeit often-times unnoticed) role of community colleges. This market-driven, needs-based, customer-focused education and training model will contribute to more cost-effective use of federal, state, and local taxpayer dollars. If the vast potential and capabilities of the network of community colleges are not recognized and used effectively in the workforce development initiatives of this country, these new initiatives are in danger again of failing, and we will have missed a good opportunity for our country (Day, 1996).

America is blessed with many wonderful institutions that focus on human development. Her community colleges have earned a seat with the very best of them.

References

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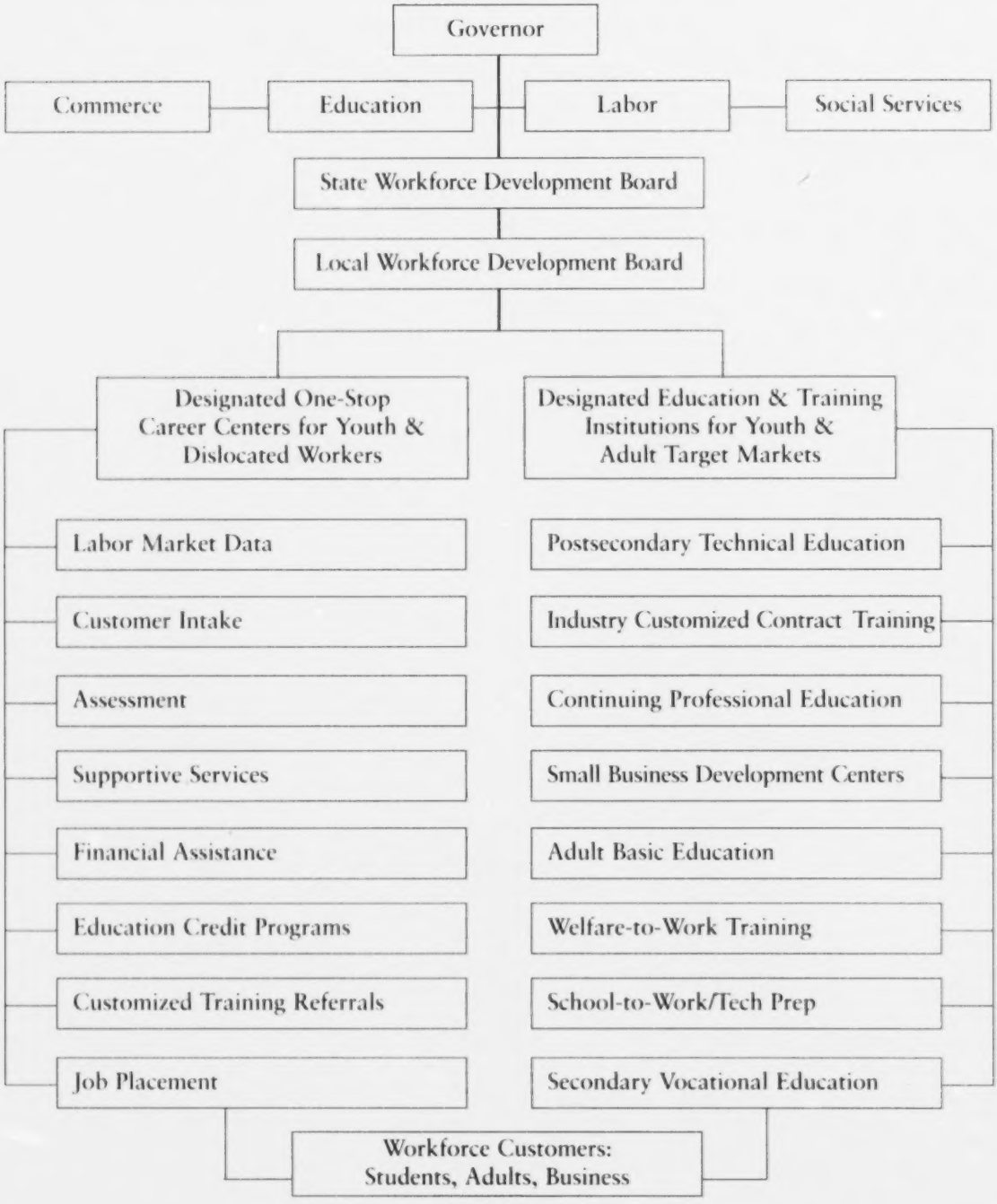
force training. Washington, DC: American Association of Community Colleges.

Day, P. R., Jr. (Commission Chairman, Ed.). (1996). *Responding to the challenges of workforce and economic development: The Role of America's community colleges. A Position Paper.* Washington, DC: American Association of Community Colleges, Commission on Workforce and Community Development.

Myran, G., Howdyshell, L., & Zeiss, T. (1995 Fall). *Community college leadership for the new century.* Washington, DC: COMBASE and American Association of Community Colleges.

APPENDIX A

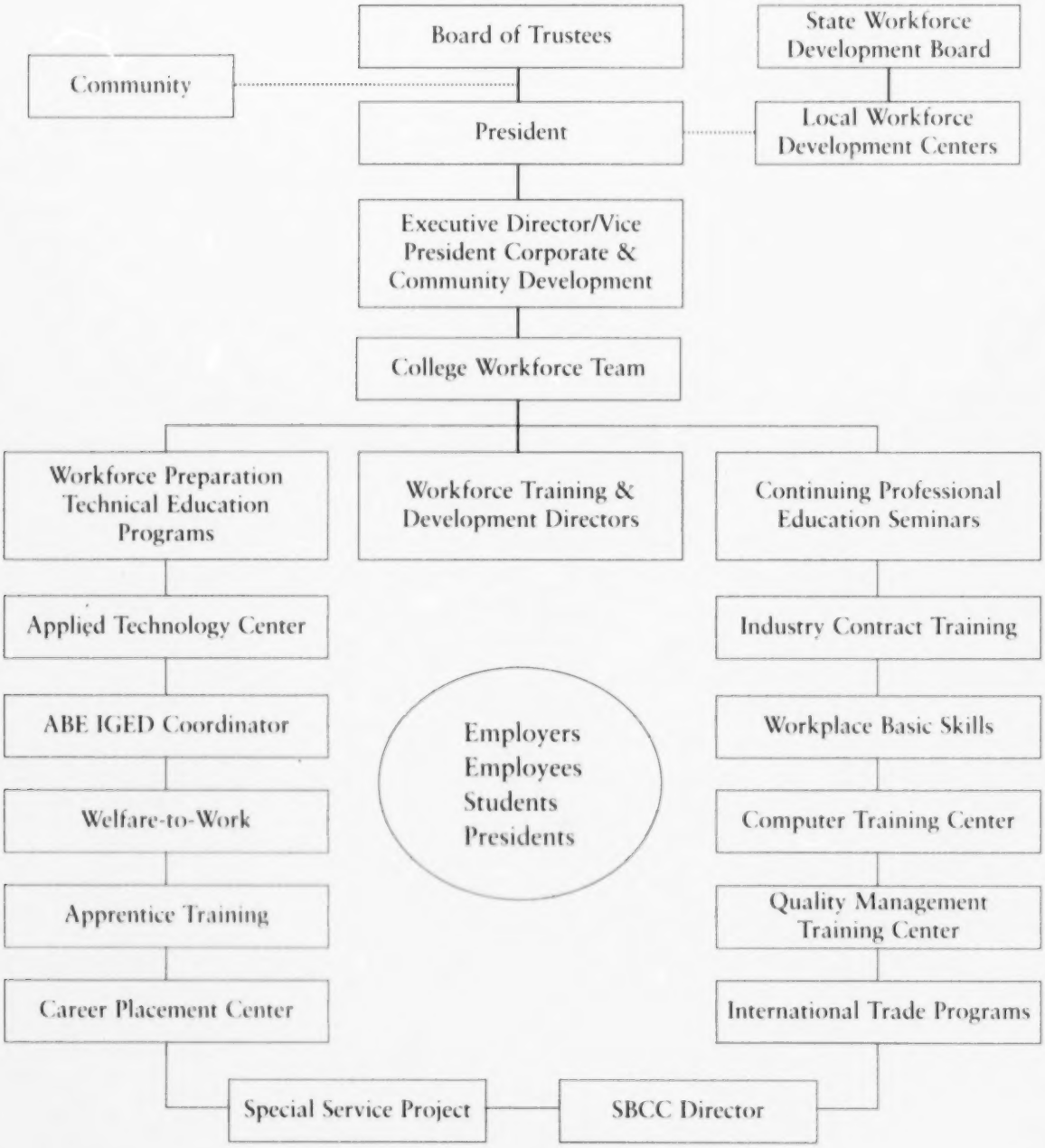
State Workforce Development System



APPENDIX B

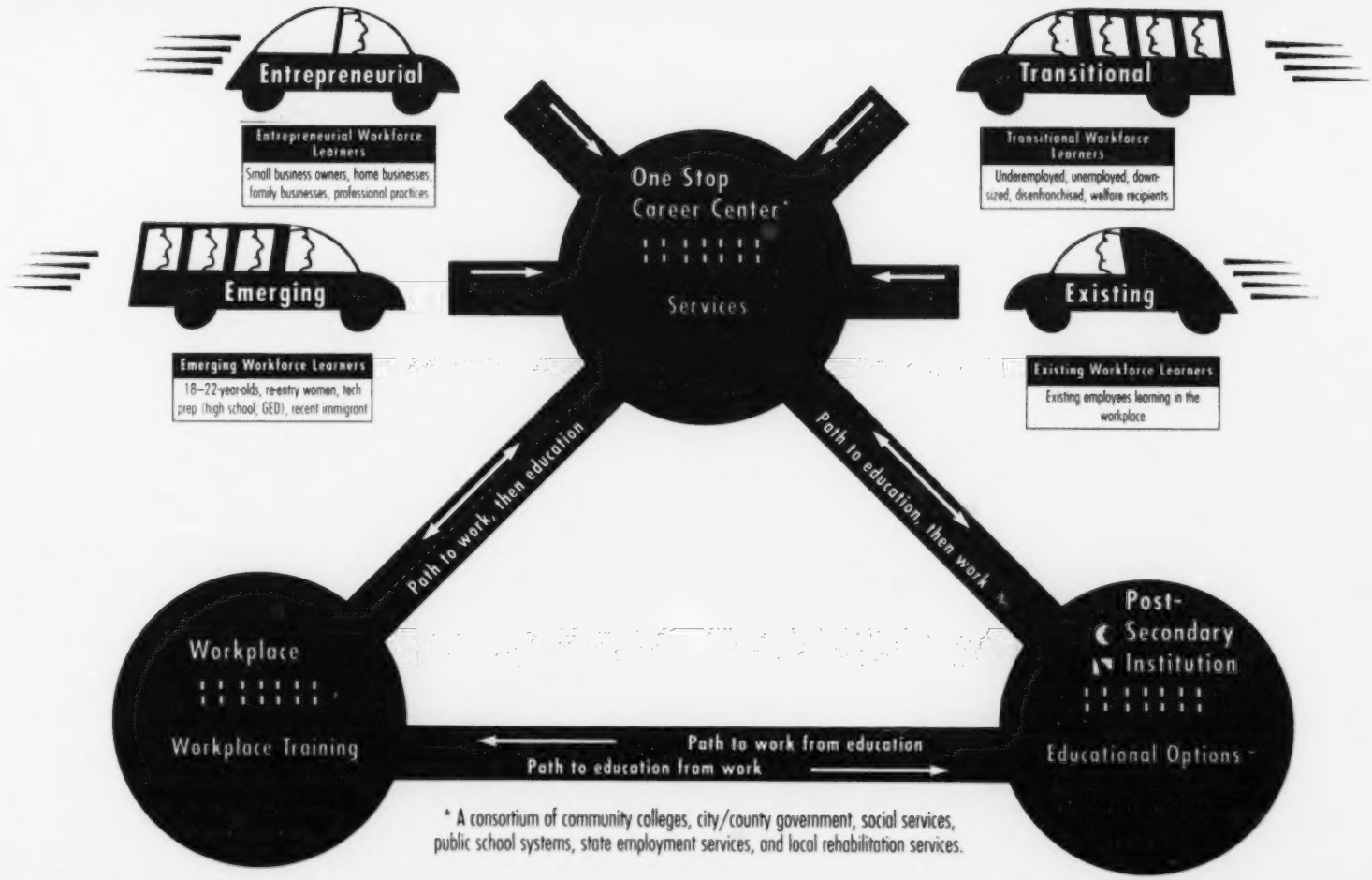
Community College Workforce Education and Training Delivery System

Functional Model



APPENDIX C

The Workforce Development Model: Educating A Continuum of Learners



* A consortium of community colleges, city/county government, social services, public school systems, state employment services, and local rehabilitation services.

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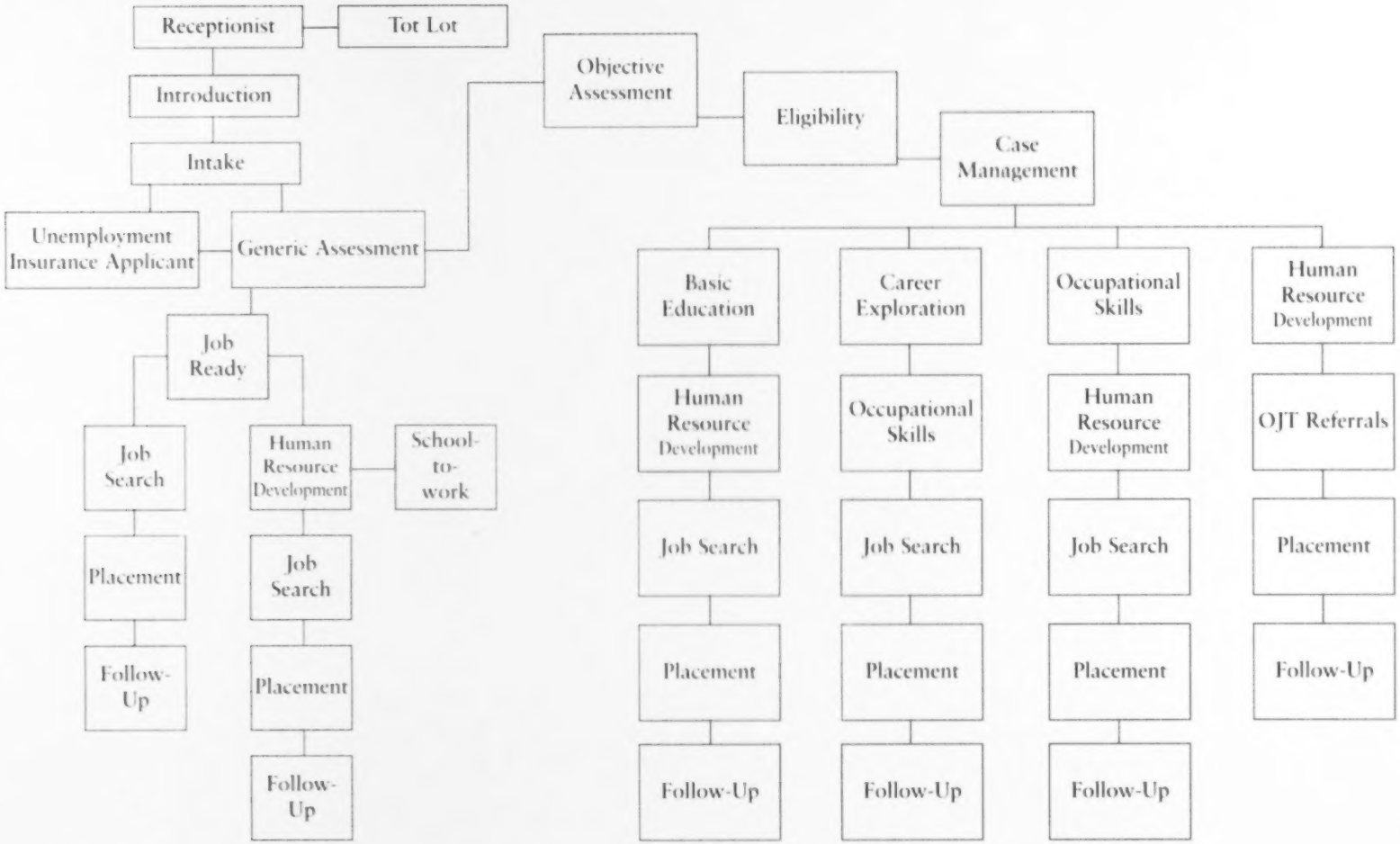
APPENDIX D

One-Stop Career Center



APPENDIX E

List of Participating Colleges

	COLLEGE NAME	STATE
1	Calhoun Community College	AL
2	Gadsden Community College	AL
3	San Diego Community College	CA
4	Central Florida Community College	FL
5	Gulf Coast Community College	FL
6	Manatee Community College	FL
7	Miami-Dade Community College	FL
8	Miami-Dade Community College	FL
9	Valencia Community College	FL
10	Des Moines Area Community College	IA
11	Eastern Iowa Community College	IA
12	Hawkeye Community College	IA
13	Indian Hills Community College	IA
14	Iowa Central	IA
15	Iowa Lakes Community College	IA
16	Iowa Valley Community College District	IA
17	Iowa Western Community College	IA
18	Kirkwood Community College	IA
19	North Iowa Area Community College	IA
20	Northeast Iowa Community College	IA
21	Northwest Iowa Community College	IA
22	Southeastern Community College	IA
23	Southwestern Community College	IA
24	Western Iowa Tech Community College	IA
25	Black Hawk College	IL

26	Highland Community College	IL
27	Joliet Junior College	IL
28	Kishwaukee Community College	IL
29	Moraine Valley Community College	IL
30	Triton College	IL
31	Butler County Community College	KS
32	Garden City Community College	KS
33	Johnson County Community College	KS
34	Henderson Community College	KY
35	Bristol Community College	MA
36	Fisher College	MA
37	Quinsigamond Community College	MA
38	Springfield Technical Community College	MA
39	Allegany Community College	MD
40	Anne Arundel Community College	MD
41	Baltimore City Community College	MD
42	Carroll Community College	MD
43	Catonsville Community College	MD
44	Cecil Community College	MD
45	Charles County Community College	MD
46	Chesapeake College	MD
47	Dundalk Community College	MD
48	Essex Community College	MD
49	Frederick Community College	MD
50	Garrett Community College	MD
51	Hagerstown Business College	MD
52	Harford Community College	MD
53	Howard Community College	MD
54	Montgomery College	MD
55	Prince George's Community College	MD
56	Wor-Wic Community College	MD
57	Glen Oaks Community College	MI
58	Kellog Community College	MI
59	Lake Michigan Community College	MI
60	Lansing Community College	MI
61	Schoolcraft College	MI
62	St. Louis Community College	MO
63	Mississippi Delta Community College	MS
64	Central Community College	NC
65	Central Piedmont Community College	NC

66	Forsyth Technical Community College	NC
67	Guilford Technical Community College	NC
68	Mitchell Community College	NC
69	Piedmont Community College	NC
70	Western Nebraska Community College	NE
71	Bergen Community College	NJ
72	Brookedale Community College	NJ
73	Raritan Valley Community College	NJ
74	Union County College	NJ
75	Santa Fe Community College	NM
76	Finger Lakes Community College	NY
77	Monroe Community College	NY
78	Central Ohio Technical College	OH
79	Jefferson Technical College	OH
80	Oklahoma City Community College	OK
81	Chemeketa Community College	OR
82	Bucks County Community College	PA
83	Community College of Alleghany County	PA
84	Community College of Philadelphia	PA
85	Community College of Rhode Island	RI
86	Orangeburg Calhoun Technical College	SC
87	Tri-County Technical College	SC
88	Amarillo Community College	TX
89	Colin Community College	TX
90	Grayson Community College	TX
91	Houston Community College System	TX
92	Mountain View College	TX
93	Northeast Texas Community College	TX
94	San Antonio College	TX
95	San Jacinto College Central	TX
96	Tarrant County Community College	TX
97	Salt Lake Community College	UT
98	Utah Valley State University	UT
99	Blue Ridge Community College	VA
100	Northern Virginia Community College	VA
101	Piedmont Virginia Community College	VA
102	Southside Virginia Community College	VA
103	Fox Valley Technical College	WI
104	Madison Area Community College	WI

APPENDIX F

WORK FORCE TRAINING SURVEY

College ID 000

Our community college appreciates your business. To continue to provide your company with quality training services, we need your input regarding skilled job training/retraining program(s) for business and industry. Please fill out this survey form by COMPLETELY marking a bubble(s) for each question as directed. Thanks for your help.

USE NO. 2 PENCIL ONLY

ABOUT YOUR COMPANY

1. Please indicate the primary area and size of your business.

Area		Size
Construction	Transportation	1 to 10 employees
Retail/Wholesale	Financial/Insurance	11 to 25 employees
Professional Service	Agricultural Related	26 to 100 employees
Industrial/Manufacturing	Government/Public Service	101 to 500 employees
Health Service	Miscellaneous Services	501 and above employees
Hospitality Service	Other (please write in below):	
Utility	_____	

NEED FOR WORKFORCE TRAINING

2. Estimates what percentage of your employees need additional skill training?

0-25% 26-50% 51-75% 76-100%

3. What type of classes do your employees need?

credit non-credit both

4. Please indicate your company's specific training and retraining needs.

	Not Needed	Needed	Much Needed	Don't Know	Not Applicable
TECHNICAL SKILLS including environmental science, advanced math/ science/engineering, blueprint reading, statistical processing control					
COMPUTER SKILLS including word processing, spreadsheets, database, CAD/CAM, programming languages					
BUSINESS SKILLS including business writing, marketing, customer service					
PROFESSIONAL DEVELOPMENT including basic supervision, total quality management, time management					
COMMUNICATION SKILLS including reading, writing, math, listening, & speaking					
COMPUTATIONAL SKILLS including basic math, charts, & graphs					

ID 000

NEED FOR WORKFORCE TRAINING (Cont.)

4. Please indicate your company's specific training and retraining needs. (Cont.)

	Not Needed	Needed	Much Needed	Don't Know	Not Applicable
ENGLISH AS A SECOND LANGUAGE for non-native English speakers					
INTERPERSONAL SKILLS including interacting with others, working in teams					
GOVERNMENT REGULATIONS including OSHA, EPA, IRS, hazardous waste, employee harassment					
CRITICAL THINKING SKILLS including problem solving, creativity, learning how to learn					
GLOBAL UNDERSTANDING SKILLS including understanding world geography, diverse cultures & people					
PERSONAL SKILLS including responsibility, self-esteem, integrity, & honesty					
OTHER SKILLS (Please describe): _____					

5. To what extent will technological change in your company increase your need for workforce training?

A considerable extent Some extent A little extent Not at all

6. What distance learning training programs would benefit your employees?

Teleconference seminars Television-based training

Video-based training Other(please specify)

Interactive videodisc training _____

EXPERIENCE WITH YOUR LOCAL COMMUNITY COLLEGE

7. How familiar are you with the various workforce training programs and services offered by your local community college?

Not very familiar Somewhat familiar Very familiar

8. Why did you select your local community college to conduct workforce training? (Choose all that apply)

Cost-effective value for money invested Training program(s) referred to us by other businesses

Quality of instruction Contracted with community college in past with satisfactory results

Community collge customized training program for our needs Other(please specify)

Convenience: provided training at on-site business location _____

ID 000

EXPERIENCE WITH YOUR LOCAL COMMUNITY COLLEGE(Con.)

9. What were your goals for the workforce training? (Choose all that apply)

- Improve employee performance and productivity
- Upgrade employees skills
- Required by the profession of the employee(e.g., apprentice training, CPA continuing education)
- Required by suppliers/customers
- Professional development or self-enrichment of employee
- Other (please specify) _____

10. Please rate your local community college for each of the following factors.

	Poor	Fair	Good	Excellent	Don't Know
Quality of training provided					
Responsiveness to employer needs					
Cost of training					
Technical skills of employees educated by the College					
Basic writing, speaking, and communication skills of employees educated by the College					
Basic computational skills of employees educated by the College					
Interpersonal skills of employees educated by the College					

11. Would you recommend your local community college to other businesses for workforce training?

Yes, without reservation Yes, with some reservation No Not sure

12. Please provide comments based upon your experience with workforce training and your local community college.

_____

_____

_____

_____

About the Sponsoring Organizations

COMBASE

Established in 1974 by 10 community colleges with a common interest in community-based education, COMBASE has become a leading organization in the nation with more than 50 institutions in 22 states. The purpose of COMBASE is to identify, validate, and employ exemplary practices in community-based and performance-oriented education and to share expertise and experience through research, publications, professional development programs, networking, and other means. For more information about COMBASE, contact Richard Alfred at (313) 747-1979.

National Council for Continuing Education and Training

The National Council for Continuing Education and Training (NCCET) contributes significantly to the economic, workforce, and community development of lifelong learners, businesses, and communities by

- developing a trained and highly skilled workforce to be competitive in the 21st century global economy;
- exercising leadership as an affiliate council of the American Association of Community Colleges (AACC) in providing quality education and training services that are equally accessible to all learners;
- encouraging innovative opportunities for lifelong learning;
- promoting corporate citizenship in communities; and
- providing quality continuing education and professional development for members.

The Council was established in 1969 and has 1,107 individual members, representing 375 institutions. For more information about NCCET, contact Elizabeth Thornton at (817) 531-4592 or e-mail her at liz@ix.netcom.com.

National Council for Occupational Education

The National Council for Occupational Education (NCOE) is a private, non-profit, professional organization committed to promoting excellence and growth in occupational education. As an affiliate council of the American Association of Community Colleges (AACC), NCOE provides a national forum for workforce and economic development professionals to affect and direct (1) the future of work-related education globally and (2) the role of two-year colleges in this arena. NCOE includes occupation, vocational, technical, and career educators; economic development professionals; and business, labor, military, and government representatives.

NCOE's primary goals are

- to provide a national forum in occupational education and economic development;
- to support federal and state legislation that enhances postsecondary education and economic development;
- to advise AACC on policy developments affecting occupational education;
- to provide critical information to members on current and future trends;
- to provide leadership through national and regional research studies, projects, and conferences; and
- to link NCOE members to other organizations whose missions and goals are similar to those of NCOE.

For more information about NCOE, contact J. D. Ross at (815) 773-6629.

"To survive and prosper in today's world requires a quality work force and communities that embrace 'quality-of-life issues.' Neither is possible without world-class education. Technology and intense competition are producing dramatic changes in the work place that require workers to develop and maintain new skills throughout their working lives. This 'lifelong learning' can be accomplished through educational institutions, such as community colleges, partnering with businesses and their employees. We're proud of the results we've achieved through our work with the community college system."

David R. Whitman
Chairman & C.E.O.
Whirlpool Corporation

"This book captures the important relationship between America's community colleges and business. It is an important work for educators, business leaders and policy makers, alike."

Zig Ziglar, Chairman
The Zig Ziglar Corporation

"This important book verifies the necessary partnership between America's community colleges and industry in building and keeping a high-skilled workforce."

John D. Hendick
President & C.O.O.
Okuma America Corporation

"This significant work enhances and builds on the critical relationship between America's community colleges and global businesses."

Bill Ryan
Senior V.P.
Sea-Land Service, Inc.

"Lifelong learning is critical to success in our rapidly changing society and community colleges play an indispensable role in that process. This book captures the essence of the important relationship between America's community colleges and their business constituents."

Bill Grigg
Chairman & C.E.O.
Duke Power Company

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AMERICAN ASSOCIATION OF COMMUNITY COLLEGES
One Dupont Circle, NW, Suite 410
Washington, DC 20036
(202) 728-0200
http://www.aacc.nche.edu